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An Address
ON
ENCEPHALITIS LETHARGICA.

GIVEN TO THE SOUTH MIDLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION

BY

C. M. HINDS HOWELL, M.D., F.R.C.P.,
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IN the spring of 1918 a series of cases appeared in this country which presented certain novel features. Professor Arthur Hall and Dr. Wilfred Harris independently drew attention to this occurrence in adults, whilst the late Dr. F. E. Batten published an account, under the title of "Epidemic stupor in children," of a series of cases which had been under his observation at the Hospital for Sick Children, Great Ormond Street, London. The suggestion was made tentatively that the cases might possibly be examples of botulism, with which they had some features in common—namely, ocular palsies, drowsiness, muscular weakness, and sphincter troubles. The food supplies at that time were not of the best, but it soon became obvious that the cases, which were appearing in increasing numbers, had nothing to do with *B. botulinus*, but were evidence of a widespread epidemic. Attention had already been called to its occurrence in 1917 by von Economo in Austria and by Netter in Paris.

Since that date we have had the disease constantly with us. In January, 1919, notification was made compulsory by the Local Government Board. The number of cases notified since then has been: 541 in 1919, 890 in 1920, 1,470 in 1921, 454 in 1922, and 1,123 in 1923. So far as I can judge, the figures for 1924 are likely to be as high as those for 1923, or even higher. It is, of course, probable that all cases of the disease are not notified, as many atypical cases occur in which the diagnosis is likely to be missed.

ETIOLOGY.

Certain facts have been brought out as the result of notification. The incidence of the disease is highest in the winter months January, February, and March; in this respect it offers a striking contrast with the seasonal incidence of poliomyelitis—a matter of some importance when considering the etiological relationship of these two diseases.

The age incidence is fairly evenly distributed. The disease may occur in babies or septuagenarians. In this respect also it offers a striking contrast with poliomyelitis, as in the latter 80 per cent. of the cases occur under the age of 20. The disease is contagious to only a very slight degree; in my own experience I have not come across more than one case in any one family, nor have I any experience of infection occurring in hospital, either among patients or nurses, in a ward in which cases of encephalitis were being cared for. In this respect the disease resembles poliomyelitis and meningococcal meningitis. But cases are on record of direct spread by contagion, though their numbers are few. In 1919 I had under my care a woman with a typical attack of encephalitis lethargica who was nursing a baby a few weeks old, and who had done so for at least a fortnight. The mother's attack was very severe, but the baby escaped infection. Hall, in his monograph, quotes a similar case in which the child became infected and died, and another which shows perhaps that there is a possibility of infection being carried through the mother's milk. In this case a pregnant woman developed the disease two weeks before her child was born. The child was at birth quite healthy, lively, and active. After being put to the breast it gradually developed torpor and somnolence. It was weaned, and almost immediately recovered and remained well.

The actual infecting organism has not been satisfactorily identified. From von Economo's cases von Weisner recovered a streptococcus growing in pairs, and in one of two monkeys he reproduced certain symptoms of the disease—lethargy, dysphagia, and paralysis—but subsequent investigations have failed to confirm these findings.

In 1919 and 1920 Strauss, Hirschfeld, and Loewe succeeded in reproducing the disease in a monkey (*Macacus rhesus*), and in rabbits, by using emulsion of brain from cases of encephalitis lethargica. They were also successful with washings from the nasopharynx of living patients. They isolated a virus from this material which proved to be a filter-passer. and also to be capable of preservation in glycerin. In these respects it closely resembles the virus of poliomyelitis.

It is probable that in both these diseases as also in meningococcal meningitis, the infecting agent gains access to the central nervous system through the nasal mucosa, and that in all of them "carriers" exist. The separation of a virus from cases of herpes labialis, which experimentally reproduces many of the symptoms of encephalitis lethargica, is a matter of great interest, but does not lessen—indeed, it rather increases—the difficulties. This virus also is a filter-passer and can be preserved in glycerin.

Levaditi and his co-workers conclude that encephalitis lethargica is due to a specific virus with the characteristics already referred to, and that it exists in an attenuated form in the saliva of healthy persons, in a more virulent form in the vesicles of herpes labialis, and in its most virulent form in the saliva of carriers, and in the nasopharyngeal mucosa and nervous tissues of persons suffering with encephalitis. These results have not been universally confirmed, Flexner and others having failed to get any positive results with inoculations from cases of encephalitis.

At this point I must say something about the possible relationship of encephalitis lethargica with influenza. Experience of the last few years has shown that outbreaks of the two diseases are apt to occur simultaneously. Further, a review of past influenza epidemics reveals the fact that cases presenting a clinical picture very similar to that of encephalitis lethargica occurred at these times. It seems clearly established that epidemiologically there is a close connexion between influenza and a group of diseases affecting the nervous system, of which encephalitis lethargica, cerebro-spinal fever, and poliomyelitis are members. The suggestion was made in the early days of the encephalitis epidemic that it might be a cerebral form of influenza. If such were the case we should expect to find cases of encephalitis lethargica and influenza occurring in the same household, as no disease is more highly contagious than the latter. This relationship, however, is far from existing. Moreover, we have seen that encephalitis lethargica appears only exceptionally to be contagious to any marked degree. We must leave it to the future to determine to what extent these diseases are mutually related.

Epidemic hiccup has occurred in various outbreaks since the appearance of encephalitis lethargica, and the question has arisen whether it may not be a manifestation of the latter disease. There is no positive evidence that it is, and some evidence to show that it is not; persistent hiccup is not a common symptom in definite cases of encephalitis lethargica, and cases of hiccup do not as a rule exhibit other symptoms suggestive of encephalitis. Recently, however, I had under my care a medical man with epidemic hiccup, who also had definite evidence of an encephalitis, as the result of which he developed hemianopia. Epidemic hiccup would appear to be more definitely contagious than is encephalitis lethargica.

SYMPTOMS.

We are dealing with an infection which produces tissue reactions scattered at random throughout the whole nervous system; the main incidence is now in one place, now in another. The clinical picture will be determined by the extent of the damage done to the several parts of the nervous system involved. Meninges, cortex, centrum ovale, basal ganglia, mid-brain, pons, medulla, spinal cord, and even at times peripheral nerves, may each and all of them become involved. It is true that the chief focus of the disease is apt to be in certain localities more than others, the mid-brain and basal ganglia perhaps especially; the result is that what has been described as the oculo-lethargic type recalls the clinical picture that we all should regard as probably most characteristic of the disease. It is indeed a picture which is rarely produced by other conditions, and in its most typical form by none. To multiply types of this disease by naming some dozen or more syndromes by their most striking features serves no useful purpose.

The onset of the disease may be acute and dramatic in the suddenness and severity of the symptoms produced, or it may be very insidious. In my experience the oculo-lethargic group of cases are likely to belong to the latter category. I have seen a number of such cases, referred to me on account of a diplopia of doubtful origin, and complaining of little else. The initial period in these insidious cases may be prolonged, constituting what may be regarded as a prodromal period in which the chief symptoms are lassitude, somnolence, slight headache, depression, and irritability. When the disease enters on a more active stage, and in cases of sudden and acute onset, fever is, I think, always present. Its duration may be a matter of hours, or it may be present for weeks, but the febrile period is as a rule short: I have had two cases under my care in which the patient was febrile for a period of eight weeks. One of these patients recovered. Cases in which the febrile period has lasted for months are on record, but these are fortunately quite exceptional. Although commonly of low grade, high degrees of fever, sometimes even hyperpyrexia, may occur. The latter is usually, but not always, a terminal event. A steadily rising temperature at the end of a prolonged period of pyrexia is an ominous sign. The tongue is heavily furred, often greenish or brownish-white, the breath foul, and the bowels usually severely constipated. Abdominal pain, associated sometimes with vomiting, may occur. I have recently seen a case which was admitted to hospital as appendicitis.

There is nothing remarkable in the condition of the pulse, nor in the lungs, but there may be peculiarities in respiratory rhythm during the active stage of the disease. Polypnoea with periods of apnoea has been observed on several occasions, due almost certainly to disturbance in connexion with the respiratory centre in the medulla. Drowsiness is one of the striking features of the disease, both in its active stage and as a sequel. It is often one of the earliest symptoms.

I saw in May, 1924, a man of 60, who gave the following history. He had started the year with an attack of influenza, which left him with sciatic pain, for which he took salt baths at Southend. In the middle of April he had his usual bath and then sat down on a seat on the parade. Here he found that he had diplopia, felt sleepy, and complained of slight headache. He travelled to London, arriving about 8.15 p.m. On his way home from the station he went to sleep in the road, lying down against a tree. He was awakened by a policeman, who suggested he should go home to bed, and evidently thought that my patient had been drinking. He started for home, but was overcome with sleep a second time. He reached his home about 4 a.m. Normally he should have got there in fifteen minutes from the station.

Another patient—a man of about 40—was playing in a two-day cricket match. On the evening of the first day he noticed that he saw double at a cinema performance. He put this down to the heated atmosphere and went home to bed. He played cricket all next day with success, and with no visual troubles. He started to ride home on a motor bicycle about 5 p.m. to go perhaps thirty or forty miles. He has no recollection of anything after that till 4 o'clock the next morning, when he found he had been asleep by the side of the road about a mile from home. He was able to waken his chauffeur, who lived close by, and was assisted home by him.

The condition of drowsiness frequently advances to one of seemingly profound lethargy; it is remarkable how a patient in such a condition can be roused to answer a question intelligently, but at once relapses again. The lethargic periods often show remarkable remissions. A boy under my care would be profoundly lethargic during the morning, going to sleep whilst the nurse was endeavouring to give him food, but in the afternoon would become quite wide awake and alert, and demand comic papers.

With this pronounced lethargy the patient may frequently suffer from insomnia. This may simply be inability to sleep at night, but is sometimes accompanied by nocturnal excitement. A girl in St. Bartholomew's Hospital was profoundly lethargic by day, but at night became extremely excited, sang songs at the top of her voice, wanted to jump out of bed, and threw anything left within her reach at any nurse who happened to be near. Mental symptoms are frequently observed; the mildest is a lack of restraint comparable in many respects to the mental condition of one not drunk, but "having drink taken." A young man recently under my care suffering from diplopia, slight fever, and a moderate degree of drowsiness, insisted on explaining at great length how badly he had treated a girl to whom he had been engaged, by breaking off the engagement in a most inconsiderate manner. In his normal mental condition he is a very reserved personality. Delirium of a "busy" kind is common. I have heard patients carrying on imaginary conversations on the telephone, dictating letters, smoking imaginary cigarettes, and so on. Sometimes, though I think only occasionally, a patient becomes maniacal.

One very striking case of the kind occurred in a patient under my care in 1918. He remained more or less comatose for about six weeks, and then became maniacal. Arrangements had just been completed for his removal to more suitable surroundings when the attack of mania ended as suddenly as it had begun, and he became quite normal, all trace of lethargy passing away at the same time as the mania.

Among symptoms due to lesions in the nervous system ocular phenomena take first place. Any or all of the oculomotor nerves may be involved, the paralysis usually being of the nuclear type with conjugate movements affected. Ptosis is extremely common, and helps to add to the appearance of somnolence which is so characteristic. The pupils show a variety of changes—small, dilated, unequal, the Argyll Robertson type, failure to react to light or accommodation. Much interest attaches to the condition of the optic disc. Papilloedema, which at one time was thought never to occur, is now recognized as being present occasionally; usually it is of low grade with but little swelling; haemorrhages are rarely met with. An intense papilloedema with much swelling and haemorrhage makes the diagnosis of encephalitis lethargica extremely doubtful.

I recently saw a patient who was suffering from intense headache, was drowsy at times, had a nuclear paralysis of the third nerves with loss of upward movement of the eyes. All this was sudden in its onset and the patient was thought to be suffering from encephalitis lethargica. Examination of the disc revealed the presence of an intense papilloedema with haemorrhages. A diagnosis of mid-brain tumour was accordingly made, and verified, unfortunately, at a subsequent autopsy.

Other cranial nerves may be affected, the commonest in my experience being the seventh. I have never seen examples of paralysis of the fifth or twelfth nerve, though it has been observed. The patient may quite early exhibit the Parkinson facies, with characteristic attitude of the arms and hands, rigidity, and, less commonly, tremor. Where these symptoms occur early I have thought the prognosis, even as regards life, to be grave and that the Parkinsonian sequel was assured in the event of the patient surviving. This view may, however, prove quite erroneous.

A girl of 17 was admitted under my care at the National Hospital in the early and acute stage of the disease. She had already developed a very severe degree of the Parkinson syndrome—was quite unintelligible in her speech, saliva dribbling from her mouth, and incontinent. I gave an extremely bad prognosis as regards recovery, and said that if she did recover she would be a hopeless case of paralysis agitans. Both predictions happily were entirely wrong. She made a complete and uneventful recovery, and is at present a member of a theatrical company, and very successful, I understand, as a dancer.

Buzzard and Greenfield first drew attention to the occurrence of hemiplegia as a symptom of encephalitis lethargica, and many such cases have since been observed. There is, of course, nothing characteristic in the hemiplegia itself, and often the diagnosis can only be made by a careful consideration of the circumstances in which the condition developed, and by a reasoned process of exclusion. Katatonia has been present in a large number of cases, and when present may be an important aid to diagnosis. Considerable interest also attaches to a number of other motor disorders of an irritative character. Among them must be mentioned fits, choreic movements (of which many cases appear to have occurred in the recent outbreak), a more pronounced type of involuntary movement designated under the title of choreo-athetoid movements, myoclonus, and muscular spasm. Epileptic attacks may occur as an initial symptom, during the course of the disease, or as an after-effect; they are more likely to occur in those cases in which the cortex is most involved, and in such cases present the common picture of clonic convulsions; but in cases where the mid-brain is chiefly involved "tonic fits" may occur, associated with rigidity and extension of the limbs. Fits, however, are not a common symptom in the disease. Involuntary muscular movements are more frequently met with. Two cases were admitted recently to St. Bartholomew's Hospital as chorea, but in the wards the nature of the cases became clear. Cases of choreo-athetosis are much less common. I have seen only one of the kind; it was

treated in the National Hospital. The movements and gesticulations exhibited were of a particularly striking character, though they did not develop until eighteen months after the initial illness.

Myoclonus occurs in a fair number of cases; the muscular contractions may involve the whole or part only of any particular muscle, sometimes causing movement of a limb and sometimes not. The muscular contractions are usually painless, but severe cramp-like pain may be experienced, and this, I think, more particularly when the abdominal muscles are involved. Muscular spasm sometimes persists for a long period, and I have seen one patient with a residual torticollis, which still persists. Peripheral nerve palsies rarely occur. I have seen two or three such cases in which the external popliteal nerve was affected, with resulting foot-drop; and another remarkable case in a boy of generalized weakness with moderate muscular wasting and absence of reflexes which suggested widespread peripheral neuritis.

Pain, apart from muscular spasm, has been noted in a number of cases. I have already referred to the case of a boy who was admitted to hospital with abdominal pain and vomiting as the result of which he had been diagnosed as a case of appendicitis. In other cases the diagnosis of rheumatic fever has been made. I have seen two such cases recently. It is interesting to note that a similar mistake is sometimes made in connexion with poliomyelitis.

Sequelae.

I must now briefly refer to the sequelae. With regard to these it may at once be said that the diagnosis of encephalitis lethargica is in many cases more easily made in the presence of its consequences than during the initial attack.

One of the most striking sequels is paralysis agitans. have referred already to the early appearance of Parkinson symptoms; they may entirely disappear, or pass into a chronic and persisting residual condition. On the other hand, cases in which the patient appears to have made a good recovery may begin many months later to develop the characteristic symptoms of paralysis agitans. Its features resemble very closely those of the ordinary senile type—facial immobility, weakness and rigidity of the limbs, the flexed attitude, the gait, are all present. Tremor is the symptom which is most likely to differ, in that it is not, in my experience, either so common, or when present so constant, as in the senile form. It may have a partial distribution, usually hemiplegic. I have several patients who show this well.

Residual ocular paralysis is common—the degree very variable. When all other movements have returned it is not uncommon to find that convergence is still faulty. Mental changes are also unfortunately very common. The bright child becomes dull, the "easy" child "difficult." Depression, sometimes amounting to melancholia, is not uncommon, and easily to be understood, in the cases with the Parkinson syndrome. More than one of my patients has stated, "I have forgotten how to laugh"; in some all emotional response has disappeared.

Impulsive tendencies are noticeable in a few cases; one of my patients always felt the strongest impulse to get in front of express trains, or if water were rushing under a bridge to jump into it, though she had no wish to commit suicide. She presented Parkinson symptoms, and the rapid movement made an almost irresistible appeal to her. A certain number of cases drift into asylums, but fewer than might be expected. Disorders of sleep may persist long after the acute stage of the disease is over—somnolent by day, the patients may awake to an excited activity at night. I do not know the meaning of this inversion, but its presence I have noted many times.

Involuntary movements, spasms, and tics of various kinds are not uncommon; several cases of the latter I have seen in connexion with the respiratory movements. Residual paralysis in the form of monoplegia or hemiplegia is met with in those cases in which it has been present during the initial stages. It does not tend to develop after apparent recovery in the same way as paralysis agitans commonly does. Seborrhoea of the scalp and forehead, sometimes to a most striking degree, may be noted. Lastly, obesity, possibly as the result of some disordered function of the pituitary, has occurred in a number of cases.

This list does not pretend to be in any way comprehensive, and I have no doubt that other sequelae have been observed. I have stated here those which in my own experience have proved most likely to occur.

I must not leave this aspect of the disease without making some reference to relapse. This occurs in an acute form in a number of cases. It is uncertain at what period we can regard a patient who has suffered from the disease as free from danger of relapse or the development of the dreaded Parkinson syndrome. I have observed what I thought was relapse in a case of this kind exactly two years after the original attack. The very long interval made me somewhat doubtful of the correctness of the original diagnosis, but reports of similar intervals, though unusual, have been made.

Pathology.

Macroscopically there is very little to see in these cases. Occasionally there are meningeal haemorrhages, usually quite small, but sometimes moderately extensive. The meninges may have a milky appearance if the superficial cellular exudate has been considerable. The brain on section is softer than normal, and numerous punctate haemorrhages are visible. These haemorrhagic points are probably the most constant macroscopic finding.

Microscopically the most striking and obvious appearances are furnished by a perivascular collection of small round cells which fill the Virchow-Robin space and form a cuff to the blood vessels. The cells in this exudate are for the most part lymphocytes, but plasma cells are also to be found. The exudate may be seen in connexion with capillaries, veins, and arterioles. The majority of observers regard this as a cellular exudate, though Buzzard and Greenfield are of the opinion that the cells are entering and not leaving the blood vessels.

There is for the most part no cellular reaction in connexion with the vessel wall, but a remarkable occurrence is calcareous arterial degeneration, which has been frequently observed. This is chiefly to be found in the vessels of the anterior part of the globus pallidus of the lenticular nucleus; it is sometimes accompanied by thrombosis of the affected vessel. It is remarkable how early this calcareous degeneration may occur. Far from being a late change in the neighbourhood of an inflammatory focus, calcification has been noted as early as the seventh day of the disease. Collections of cells are also met with, apart from the vessels, in the tissues. The vascular changes and cellular foci here referred to may occur throughout the whole of the nervous system, not excluding the spinal cord. The pains, myoclonus, and muscular spasms that occur as clinical manifestations of the disease no doubt owe their existence to these scattered lesions.

Changes in the nerve cells are met with, similar in character but much less extensive than are found in poliomyelitis. The changes consist of (1) neuronophagia, in which the nerve cell appears to be undergoing a destructive change as the result of the activities of proliferated neuroglial satellite cells; (2) chromatolysis, with swelling of the nerve cell, eccentricity of its nucleus, and diffuse staining of Nissl granules; (3) neuroglial proliferation. In cases of the Parkinsonian type many observers have described profound degenerative changes in the cells of the substantia nigra in the mid-brain. This has opened up a wide field for further investigation which is likely to throw light on the physiological functions of the cells of the substantia nigra. In addition to these changes, fatty globules, which tend to become agglomerated and to undergo calcareous deposition, have been observed in many cases.

Contrary to what might have been expected, the cerebrospinal fluid usually shows few changes from normal. But changes may be met with in connexion with the cells and the protein and sugar content. Although the count of cells is usually lower than 10 cells per cubic millimetre, there may be a considerable increase—counts of 30 to 80 cells per cubic millimetre are met with occasionally. It is very rare to find more than 100 cells, and if such a number are present it suggests meningitis as opposed to encephalitis lethargica. These cells are almost entirely lymphocytes,

in which respect this disease resembles poliomyelitis, and incidentally tuberculous meningitis—a disease which often causes a good deal of difficulty in diagnosis.

The protein content of the cerebro-spinal fluid rarely shows any marked increase, whilst the reverse is the case in meningitis, but 0.03 per cent. is sometimes met with. The chlorides are not altered—another point which in a doubtful case may prove of use in making a diagnosis of encephalitis as against meningitis. In the latter the chlorides constantly show a small reduction. Any figure below 0.68 per cent. would suggest meningitis very strongly. So, too, with the glucose content. In encephalitis this is unaltered, or even slightly increased, whilst in cases of meningitis, and more particularly tuberculous meningitis, the quantity is substantially diminished or absent. Changes in the blood are not striking—a small leucocytosis with a total count of 10,000 to 12,000 may be expected.

DIFFERENTIAL DIAGNOSIS.

Encephalitis may be extremely easy or impossible to diagnose. Often it is much easier to recognize from its sequels than during the initial stages. Whilst it is true that in many cases the disease has escaped recognition, it is no doubt also true that in the interest aroused by the advent of a new disorder—at any rate new within our experience—many cases have been labelled encephalitis lethargica which were nothing of the kind. Of acute infections, those most likely to cause trouble in diagnosis are influenza and tuberculous meningitis. The former suggests encephalitis in those cases in which headache, prostration, drowsiness, and fever are the prominent symptoms, whilst the latter may exactly reproduce the clinical picture of encephalitis.

The absence of such signs as retraction of the abdomen, rigidity of the neck, Kernig's sign, and tache cérébrale should help in the diagnosis, though the intrinsic value of each as a diagnostic sign is slight. A careful comparison of the cerebro-spinal fluid in conjunction with the clinical picture should help materially in the recognition of tuberculous meningitis and make the diagnosis certain if other forms of meningeal inflammation are present.

I have already referred to possible difficulties in connexion with chorea, and to errors which occasionally arise in connexion with abdominal pain and rigidity. Vascular lesions may cause great difficulty, and I think that in connexion with these the diagnosis of encephalitis is more likely to be made in error than the converse. The age of the individual is no help in this connexion, as we have seen that encephalitis has no regard to age. Tumour or abscess of the brain sometimes suggests encephalitis, but the presence of papilloedema of a marked type would be much in favour of tumour, although we have seen that a low-grade papilloedema sometimes occurs in encephalitis. The absence of any probable cause for abscess should help in its exclusion, but the presence of an ear discharge, present or recent, does not exclude the possibility of encephalitis.

PROGNOSIS.

Even more difficult than diagnosis is prognosis. Two points have to be considered: will the patient recover, and, if so, will recovery be complete? or will one or other of the sequelae arise? The answer to the first question may remain long in doubt. No definite answer can possibly be given to the second.

Severity of onset does not necessarily imply a fatal issue, nor should too optimistic a view be taken with regard to a case of insidious and apparently mild onset. It would be possible to quote many cases to illustrate the truth of this. Cases with a prolonged febrile period are, I am sure, dangerous. I have referred already to the ominous significance of a slowly rising temperature after a febrile period of two or three weeks. Statistics of the mortality of the disease have varied from 30 to 50 per cent.—figures which are, of course, quite useless in helping to make a prognosis in any individual case.

With regard to sequelae, one can say that of the cases which recover perhaps 50 per cent. will have residual symptoms, from some of which, notably the Parkinson syndrome, they may die. Many of these sequelae no doubt will be slight, and not in themselves disabling. It is important to remember that a case which has made an apparently perfect recovery may develop some sequel at any time in the next two years. After that period I should say the risk was negligible, and the majority of patients show evidence of incomplete recovery within twelve months.

TREATMENT.

There is unfortunately no specific treatment that has proved its value. I am convinced of the importance of recognizing the early ambulatory type of the disease and putting the patient to bed. There treatment on general lines must be carried out in so far as diet and regulation of the bowels are concerned. Most of the patients suffer with obstinate constipation.

A gargle of potassium permanganate may well be used by the patient, if he is in a condition to so do—and by those in contact with him.

With regard to any special therapeutic measures, it is safe to say that none has so far offered convincing evidence of success. Hexamine has had an extended trial, by the mouth, hypodermically, and intravenously, but the results have been disappointing. In some cases serum, either from the patient, or simple horse serum, and in some cases anti-meningococcal serum, has been used apparently with advantage. Repeated lumbar puncture has been recommended, although it is difficult to see on what logical grounds; I have, however, seen an improvement in the depth of the lethargy follow a lumbar puncture. Insomnia, delirium, or excitement can be dealt with on ordinary lines. The residual symptoms or sequelae are extraordinarily resistant to every therapeutic measure.

THE ANTE-NATAL CLINIC.*

BY

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I HAVE chosen the subject of the ante-natal centre, not because I am the best fitted to deal with it, but as an act of atonement for a certain lack of faith in the first instance. Those of you who, like myself, have worked for years amongst the very poor know how, with their poverty, goes a certain pride, which resents interference in their affairs. I thought of the difficulties we should have in getting the confidence of these people, and I was unable to anticipate the results that have followed the working out of the scheme. I was reckoning without the enthusiasm and tact that sisters and health visitors have brought to the work, and the enthusiasm again and knowledge that those responsible for the medical side have shown.

I am surprised sometimes at reading the statistical results of fifty years ago, and we occasionally come across to-day despondent remarks as to the progress made in midwifery. These are mainly based on mortality results, and more particularly on those relating to puerperal fever. I have no doubts as to the progress made, having watched the results over a period of forty years. To begin with, figures are not always reliable, and we must remember further that the range of work dealt with to-day is enormously greater than it was at that time, and that mortality results are more accurately stated. When we remember that our armamentarium consisted of a bottle of ergot, often administered too soon, and a Higginson syringe, which was used indiscriminately for the rectum and the uterus, we may wonder that the results were so good as they were.

But, however we may argue about death rates, who can doubt the enormous improvement that has taken place in the morbidity results? Where are the cases of vesico-vaginal fistula that were a commonplace in the operating theatre of a few years past? Where are the sequels of severe injuries and sloughing of the vaginal passage, the atresias, the entire loss of the urethra or of the posterior bladder wall? I never see them to-day.

During the last year or two there has been a complete revolution in the hospital practice of midwifery. For many

* The Purvis Oration, delivered before the West Kent Medico-Chirurgical Society, December 12th, 1924.

years after I started work it was a case of "alarums and excursions," almost invariably at night. Nothing was foreseen. Operations were extemporized in the bedrooms of the poor. I do not know that it was, but it ought to have been, one long nervous strain.

Gradually some improvement came when hospital beds were provided for urgent cases, and we managed to get the more severe cases of pelvic deformity to attend earlier for adequate arrangements to be made. This diminished greatly the number of cases in which the cephalotribe was used. To-day one has peace of mind. Nearly everything is foreseen; very little is left to chance. The extern goes to the patient with a complete history of his case. The cephalotribe and the high forceps will soon, I hope, be a matter of past history.

I will describe shortly the working of the Salomon Infant Welfare Centre at Guy's Hospital, the only one of which I have any knowledge.

In 1918 the hospital received from the executors of the late Mr. Leopold Salomon £10,000 to endow an infant welfare centre, and on receipt of this money a committee, composed of representatives of the governors, the hospital staff, and outside persons interested in infant welfare, was appointed, and as a first step took over three houses adjoining the hospital, and by their conversion provided accommodation for ante-natal and post-natal clinics, and for the residence of a sister superintendent, six health visitors, and a domestic staff. The medical staff consists of the two obstetric assistants who are responsible for the ante-natal clinics, and two medical officers who are responsible for the post-natal treatment of the mothers and for the welfare of the children up to the age of 5 years.

I like to mention the names of the two men who during these six years have organized the ante-natal work, who have made this department the success that it undoubtedly is, and who will no doubt bring before you one day something more solid than the scraps I bring with me. They are Mr. McNair and Mr. Cook, and to them I owe a great deal that this paper contains. The area of the ante-natal clinic is that of the old maternity district, which extends about a mile round the hospital.

The procedure is shortly as follows. Pregnant women living in the maternity district apply to the almoner of the hospital for a card entitling them to attendance by the hospital during their confinement. Their circumstances having been inquired into, and it being found that they are eligible for treatment, they are referred to the ante-natal clinic, where they undergo a thorough examination by the medical officers. Attention here is paid not only to the complications directly due to pregnancy, but also very particularly to such conditions as heart trouble, phthisis, the teeth, and the health generally.

Great stress has been laid upon the teeth, the condition of these in poor people leading to much anaemia and debility. In consequence a special dental clinic has been instituted under the care of a special dental officer, to whom expectant mothers are sent to have their teeth seen to. We are satisfied that an enormous improvement in health has resulted, the patients becoming better nourished and better able to nurse the children. The mothers attend at regular intervals, according to instructions, up to the time of the confinement, the number of these visits depending naturally upon the presence of some abnormality relating to the pregnant condition or to the general health. In 1923, 2,210 mothers attended during the year, with a total number of visits of 6,773. It will be seen that this represents a large out-patient department, and that it throws a lot of work on my junior colleagues. Not only are the cases seen here, but they are referred when necessary to the different departments of the hospital for special opinions and advice, some of them being admitted either to the obstetric or to the medical wards.

I referred at the beginning of this paper to difficulties that I anticipated. But I underrated the importance of the hospital connexion. For a long period the district surrounding the hospital has depended on the maternity charity for its confinements, and in this way has grown up a trust in us that was stronger than I realized. It may be some such faith in us that has led to the centre being known in our district as "Salomon's welcome centre." A most important factor, again, in bringing expectant mothers to us early in their pregnancy is the fact that they have to apply for a card for their confinements. As I have pointed out, after the card is given they are sent to the ante-natal centre, thus enabling us to examine and keep a watch, during their pregnancy, on all cases that we shall subsequently attend at their confinements. The most important details of these examinations, with any possible difficulties likely to be encountered during labour, are entered on a card, which the student or pupil midwife takes with him or her to the case. It is difficult to exaggerate the importance of this procedure.

Another difficulty I expected was due to competition, mainly that occurring as the result of the Midwives Act. The better class artisan was, I thought, likely to depend on the local midwife. Apart from the long tradition of dependence on the hospital, the poverty of the neighbourhood has helped us, by eliminating largely competition by midwives. Attending the hospital, not only for their confinements but also for all other ailments, the idea of anything like compulsion does not seem to have arisen, and they readily accepted new measures.

Not only has the hospital as a centre helped us in establishing our ante-natal and post-natal clinics, but it affords us another great advantage over clinics not so situated. I refer to the ease with which patients can be sent to the various departments of the hospital for further advice.

As examples of assistance that has been of the greatest use to us I may mention that obtained in the tuberculosis department from Dr. Marshall, and Dr. Hunt's advice with regard to heart cases. I will refer to these again. The facility with which chemical and bacteriological examinations can be made must be mentioned, and also the ease with which any accessory department, such as the dental, can be set up; and last, but not least, the clinic provides invaluable scope for the teaching of students and for research. Whilst the hospital has been of use to the welfare centre, there can be no doubt as to the importance that this centre has been to the obstetric staff of the hospital. The two have helped one another, and through this close association great improvement in the treatment of women during pregnancy and labour has resulted.

Serious operations during the course of and often late in labour, that at one time occurred with comparative frequency, and had to be dealt with as matters of urgency, are now anticipated, and those that are likely to be attended with difficulty are admitted to hospital before labour begins. The importance of this in avoiding any delay in operative procedures is obvious, and not only is unnecessary maternal suffering avoided, but a reduction both of the death rate, and more particularly of ensuing morbidity of mother and child, results. Dr. Eason, the superintendent of Guy's Hospital, in a paper describing the institution and working of the Salomon centre, from which I have most unblushingly stolen what I wanted, concludes with the following paragraph:

> "The experience which the hospital authorities have derived from the establishment of the infant welfare centre makes it quite clear that infant welfare centres should, if possible, be closely associated with, or actually established in, hospitals, and that infant welfare centres should in all cases, if possible, include ante-natal clinics, so that the mother and the child can be kept under continuous observation by the same set of medical officers."

In addition to being seen at the infant welfare centre the mothers are visited at their homes by the health visitors, who give them advice as to domestic hygiene and the feeding of the infant. To show the importance of their assistance to the mothers I will only mention the fact that owing to their encouragement 96 per cent. of the women feed their babies at the breast.

It is too early yet to give anything like a statistical history of results, but as seven out of every ten people seen at the centre have been seen before, and as notes relating to them are kept, we should in time have invaluable material.

There are one or two subjects I should like to refer to shortly, and the first of these is heart disease complicating pregnancy. This has interested me considerably during the last two or three years. As showing the importance of the subject, approximately 200 cases have been seen since the opening of the centre. Only a small proportion of these

are serious enough to admit to hospital, the majority going through pregnancy and labour without serious symptoms or risk. It will be interesting to see as time goes on what happens in subsequent labours.

There are a few cases, however, in which the heart is so seriously affected that one anticipates a fatal result, either during labour or shortly afterwards. There is no doubt at all as to the serious effect on the heart of prolonged efforts at expulsion. I used to be asked to see these cases with a view to induction of labour. But I rarely agreed to this. If anything, induction is a more serious trial than labour at term, and I hold the view that those patients who would survive induction would pass equally well through labour at full time, and that those who appeared likely to die in the course of labour were equally likely to die as the result of induction.

I think it was with Dr. French that I first discussed the question of Caesarean section in these cases, over a case of mitral stenosis and auricular fibrillation. From her condition it seemed abundantly clear to both of us that the patient was not likely to survive a labour lasting some hours. I do not think Dr. French imagined that she would stand a Caesarean section, but in any case he thought it would cause less distress. I was more hopeful. I had had some experience in abdominal sections of cases with very bad hearts, and I knew that, provided they were not asphyxiated, they took anaesthetics and stood the operation better than might be anticipated. I found it to be the same in this case. She gave no particular anxiety either during the operation or subsequently, and although when she left the hospital her heart was still very irregular, she was able to walk about without marked dyspnoea. Since then I have performed Caesarean section on a few more cases after consultation with Dr. Hunt.

One case that suffered from paroxysmal tachycardia had severe mitral and aortic disease. Beyond a little bronchitis she did well after the Caesarean section, and suckled the baby. A month later she had an attack of confusional insanity, and ten months later was again admitted to hospital, when she died.

It appeared to me that the very bad cases suffered mainly from mitral stenosis and auricular fibrillation, and, having a talk recently with Dr. Hunt, I asked him what conditions he considered would cause the gravest anxiety as regards labour. He thought that cases with auricular fibrillation, very large heart, and those having very bad exercise tolerance would give the worst prognosis. As regards anaesthetic, C.E. was given with oxygen. The most important thing is to avoid asphyxiation and anything like overstimulation of the heart. I think Dr. Hunt has been as much struck with the results as I have been. The relief to the mothers has been much greater than either of us could have anticipated, and recovery has been speedy. Instead of twenty-four hours, perhaps, of the greatest distress during labour, with death hanging over their heads—and I have little doubt that few of the cases I have operated upon would have survived this ordeal—there has been comparatively little distress for the patients and very little anxiety for those who had to look after them.

Only recently I had a patient sent to me with a history that she had nearly died during her last confinement, that she had adopted precautions against further pregnancy, which, as generally happens in such cases, had failed. She was four to five months pregnant. Dr. Hunt considered that pregnancy should be terminated in the interests of the patient, who was rapidly becoming worse. Induction at this stage of pregnancy is often a tedious business, requiring more than one anaesthetic, and as opening the abdomen allowed me to sterilize her, I did a subtotal hysterectomy. She gave us not a moment's anxiety, which we can usefully compare with her narrow escape at the previous confinement. The results have been such that I shall not hesitate in any future case in which the risks of labour appear to be such that death is likely to result to perform as an alternative Caesarean section.

Albuminuria.—Finding albumin in the urine at an early stage in pregnancy, we ought theoretically to avoid the risk of eclampsia. We have not done so. Out of 4,000 cases in the last two years we have had one case. This was a patient who, suffering from chronic nephritis and a high blood pressure, had in the course of her first pregnancy a stillbirth at seven months.

She was admitted during her second pregnancy at about the twenty-eighth week for albuminuria. This improved so much that she was allowed to go home. She did not carry out the instructions given her, and she came back in a week with eclampsia. The Dublin treatment was employed, but failed to check the fits. Caesarean section was then performed, and the patient recovered. The failure in this case was clearly due to the patient, who, probably tired of the rigid treatment as regards diet endured for some time, allowed herself a little more licence than was good for her. This will probably always prevent us getting those theoretically perfect results I have mentioned above.

The only criticism I would make on the treatment above is this: that I dislike Caesarean section as a late measure when other methods have failed. It has brought it into discredit in the past, and although it succeeded here it generally fails. The vexed question of Caesarean section *versus* the Dublin treatment we still have to leave to the future to decide.

Phthisis as a complication of pregnancy presents considerable difficulties. Roughly one can say that whilst some cases became rapidly worse, in others no alteration was perceptible, whilst in a few there seemed to be some improvement even in the general condition.

This vague position has been cleared up for me by Dr. Marshall, and from some notes on the subject he has kindly made for me I select the following. It is in early cases of phthisis that pregnancy produces an exacerbation of the disease. In these early cases the general condition of the patient remains good during the first few months of the pregnancy, and symptoms may even be ameliorated. Deterioration, with pyrexia, wasting, and increased cough, often commences about the seventh month of pregnancy, and there is rapid extension of the disease after childbirth.

A number of cases have been seen during pregnancy who had had pleural effusion or open pulmonary tuberculosis at an earlier date, but in whom the disease had been arrested. With careful supervision most of these patients have gone through their pregnancy and puerperium without any ill effects on the lungs. In a few there has been a lighting up of the old disease, though in most of these cases it has become inactive again under treatment. When the phthisis is of some years' standing and the patient does not show severe toxaemia pregnancy does little harm. There may be a slight increase in pyrexia and sputum at the latter end of pregnancy, but as a rule there is no gross deterioration in the general condition.

It is clear from these remarks of Dr. Marshall's that the cases that call for interference are the early ones, the arrested and chronic cases being allowed to go to full term, rest and extra nourishment being the most important details of treatment. The mother is allowed to nurse her baby if there is no toxaemia. Dr. Marshall holds that the baby is more robust and better able to withstand infection if it is allowed to take its natural food.

For some years past cases have been sent to me from time to time in the early stages of pregnancy, to have this terminated by the induction of miscarriage. It was not long before I discovered that this was a useless procedure. The patients of the hospital class invariably returned, in a few months' time, again pregnant; and even in people of a better class who had been warned of the risks involved, and who had taken measures of precaution against conception, it was by no means uncommon to find that pregnancy had recurred. As a result I refused for a time to entertain any idea of induction.

Another thing I found, which I am glad to see Dr. Marshall agrees with, is that induction either of miscarriage or labour seemed to do as much harm to the pulmonary condition as allowing the pregnancy to go to full term. I am not at all clear as to the reason of this.

As a result of all this I adopted another line of treatment. When it was made clear to me that not only should the existing pregnancy be terminated but that it would be unsafe for the patient to have any children at a future date, I opened the abdomen and emptied the uterus through the abdominal route, sterilizing the patient by removal of the Fallopian tubes. In early cases, in place of this, removal of the uterus by supravaginal hysterectomy can be

considered. Here again, as in heart disease, I was pleased to find that the results were better than anticipated, and attended with less ill effects than appeared to attend induction of miscarriage and labour. Dr. Marshall, who sees these cases over a long period of time, is so satisfied with the results that he states definitely "that the best results are obtained by Caesarean section" (meaning by this the emptying of the uterus by the abdominal route at any time of pregnancy).

I think the number of cases in which an operation is likely to be called for is small, and I still feel that interference in any case should be most carefully considered before it is undertaken.

I have already mentioned that cephalotripsy is becoming an operation of the past. Curiously enough, we have found that when obstructed labour occurs calling for destruction of the infant it is more likely to be found in a multipara than in a primipara. Every now and again a woman of about 40 who has had a series of children born without mishap gets obstruction. This has been explained by saying that the children get progressively larger. I know no very satisfactory evidence of this. It may be due to falling forwards of the sacral promontory owing to increasing weight of body, and possibly to working hard shortly after confinements, when the pelvic joints are still lax. My colleague Mr. McNair suggests that it is due to lack of play in the pelvic joints during labour, the joints becoming ankylosed. We have had one such case recently, in which we performed Caesarean section.

Time does not allow me to go into the question of contracted pelvis. I might, however, conclude with a few remarks on the subject of induction of labour. If one were to classify obstetricians it would be into those who like induction (or say they do) and those who frankly do not. I put myself in the second class.

In theory nothing is simpler. For some reason or another it is decided to induce labour at the thirty-sixth week. When this time arrives a few bougies are introduced into the uterus, and in twenty-four hours labour starts and the child is born without further anxiety. This assumes two things—that we know exactly when the thirty-sixth week has arrived, and that the infant is going to remain the same in size as on the preceding occasion. These assumptions being fallacious, we have to fall back in addition on the rather difficult procedure of estimating the relative sizes of the child's head and the pelvis.

In some cases we find ourselves inducing earlier than we intended, and possibly lose the child from prematurity; in others we have a shrewd suspicion that induction has coincided with labour at term. In one case labour comes off with such ridiculous ease that we wish we had waited for labour at full term; in another we meet with more difficulty than we anticipated, and perhaps lose the child.

Further, instead of labour coming on shortly after the introduction of bougies, it often hangs on for a week or more, to the anxiety of the doctor, the discomfort of the patient, and the mental distress of the relatives, who will not be convinced that everything is right. This operation is, as far as I can gather, an essentially English one, and perhaps the most uncertain and uncomfortable one we possess.

The margin of cases suitable for induction is very small and none too easy to detect. Perhaps its most important indication is in post-maturity. I have always preferred, where possible, to go to full term. It is curious in what a number of cases in which one was tempted to induce labour, the pregnancy is terminated without undue difficulty. In the few remaining one can wait till labour starts, if necessary, and, satisfactory progress not being made, perform Caesarean section; and I do not believe that many of these cases would have proved satisfactory if induction had been performed earlier as an alternative.

As I remarked, I am in a position at the present time to make a few scattered remarks only, and these mainly in reference to recent experience in heart and lung cases. I feel certain, however, that the establishment of these centres has already proved of very great value to us, and that they will enable us in the future to work out the many difficult problems that still confront us in obstetric practice.

THE THYROID AND MANGANESE TREATMENT IN VARIOUS DISEASES.

(First Report.)

BY

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In the course of work as a general practitioner cases are constantly encountered, due to some toxaemia or chronic infection which one tries in vain to remove. I noticed that many of these chronic cases presented the signs of thyroid inefficiency, and was thus led to study Colonel McCarrison's well known books, *The Thyroid Gland in Health and Disease* and *Studies in Deficiency Diseases*. As the idea of this treatment was evolved entirely from this study, whatever merit may in the future be found to pertain to it will be due to the vast amount of work he has done.

The treatment consists in the administration of rectal injections of a solution of pure potassium permanganate, of various strengths, given at various intervals, according to the severity of the infection or the length of time it has existed. The standard solution used is 1 grain of permanganate to 1½ pints of sterile warm water, and, as evidence is accumulating that the tablets or soloids of the manufacturing chemists are more reliable than are the ordinary commercial crystals of the drug, it should be made from these. As the oxidizing power of potassium permanganate is somewhat reduced by boiling water, a pellet of the drug is crushed to powder in an earthenware basin with a teaspoon or some metal crusher; cold water is poured on to it, and hot water is added to the required volume and temperature. There should be no undue delay in using the preparation, as it is believed reduction in its power takes place fairly quickly on exposure. A metal or painted basin should not be used.

An injection is given with the patient lying on his left side, and it must be administered slowly by means of a funnel and tube or Higginson's syringe. It should be given after the bowels have acted; it should not be used to effect the purpose of an ordinary enema, as it is given with the intention of its being retained.

Patients sometimes have to be encouraged during the first few days, but as they soon feel better they are willing to continue. When subjects of stasis are beginning the treatment, a larger volume of the solution is needed during the first few days until the bowels are cleared. Doses of liquid extract of cascara are given two or three times a day to cultivate an action of the bowels every twelve hours. As the neuro-muscular functioning of the bowel improves, it is more readily stimulated, so that smaller doses of the liquid extract are soon found to be sufficient, until, by degrees, none is required. Those who have difficulty at first in retaining even a small quantity of the solution should remain lying down for twenty minutes or half an hour, when the desire to return it will have passed off. Or, by assuming the knee-elbow position, the fluid runs higher up the bowel, and the desire to void it passes away completely in most cases.

The quantity and the strength of the solution to be used in any given case can only be estimated by experience and by studying the individual. For instance, two doses of a quarter of a pint in the day may be found more effective than one dose of half a pint. In every case it is necessary to warn the patients that they may feel some pain in the epigastrium within a few minutes after the injection is given. It does not last long as a rule, and it is not often complained of after the first few days. They should also be warned that, from three days to two weeks after treatment has commenced, they may pass long white skins or strings of mucus in the stools. Unless this warning is given some may be frightened, thinking they are suffering from tapeworms. Complete mucous casts of the bowel from three to fifteen inches in length are sometimes passed. Enmeshed in these casts enteroliths, and perhaps grape skins, etc., may be seen occasionally.

Thyroid extracts in compressed form, as supplied by most manufacturers, are now very reliable, and these are

given in doses according to the degree of inefficiency the individual shows, or to the inefficiency which can be inferred from his family history. The usual well known signs of inefficiency are depended upon, but when in doubt recent photographs are of value in deciding changes in the eyebrow, in the expression of the eyes, or changes in the shape of the neck and configuration generally. In ladies a hint is sometimes given by hearing that, a few months previously, they had suddenly found their gloves too small, and had been forced to wear a larger size. Or they may, on inquiry, be found to be using cold cream or emollient applications to their thickened eyelids. One-grain doses are given twice daily on the average, but doses of half a grain to 5 or 10 grains daily are in some cases desirable, with proportionate doses in children.

In a very small percentage of cases of rheumatoid arthritis some increase in swelling and pain has been noticed for the first few days after commencing treatment. When this happens it should be stopped for some days; and when resumed the injections should be given alone for three or four days before resuming the thyroid extract.

Another method of administering potassium permanganate in an easily absorbable condition is by cachet. From one-eighth to half a grain of the pure powdered drug is enclosed in the smallest sized cachet. One is swallowed with half a pint of hot water on waking in the morning, when the stomach is empty, and four minutes later, when the cachet will have opened, another long drink of hot water is taken. This is by no means so effectual as is the injection method; but where continuous treatment is desired, and on occasions when injections are not practicable—as, for instance, when travelling—this method will make it possible to continue the course. Very seldom is any sickness caused, but some people appear to be unable to include an egg in their breakfast without feeling sick when this oral administration has been ordered. Nor should more than twenty-one cachets be ordered at a time, for some loss of oxidizing power may result by keeping the cachets too long, especially if exposed to damp.

In every case it is advisable to take the blood pressure before starting treatment. Patients with low blood pressure should be carefully watched in case it is further lowered, when sickness and giddiness may result. This, as a rule, quickly subsides if small doses of tincture of digitalis and nux vomica are given two or three times daily. No case has been recorded yet of anyone being so sickly that the treatment could not be resumed after suspending it for a day or two. Self-administration is easy for some, difficult and impossible for others. Men, if only requiring from three to six ounces of the solution occasionally, can give it to themselves in an upright position and retain it with ease; but women and invalids who are anxious to carry out the treatment themselves will succeed better after they have had instruction from a nurse. Throughout the treatment suitable dieting is of consequence, correction being imperative in cases where diets have been obviously faulty in their carbohydrate or vitamin content and balance.

Having found that this treatment yielded results far better than those obtained by other methods I had previously employed, I sought the co-operation of others in testing it. My object was to ascertain, from the experience of as many doctors as possible, in what conditions it did good and in what conditions it did not. Accordingly a circular letter was sent out setting forth the nature of the treatment, the principles which I conceived to be underlying it, the results I had already achieved, and requesting the recipients to use it in cases of toxic origin, and to submit their results, good or bad, to me. This letter was sent to sixty-eight medical men and specialists in various branches of medical practice, of whom thirty-four were kind enough to employ the method and to post the results. To those whose names appear at the foot of this report I am greatly indebted for their willing and active co-operation. The reports showed that a great variety of conditions had been treated by this method. An informal committee was arranged and the reports were submitted to it. In certain types of cases the results were no better than were to be expected from other lines of treatment; in others the cases were too few at present to enable any appreciation of the value of the method to be arrived at; while in the remainder the results were such as appeared to warrant the submission of this report. The total number of cases treated by myself and the doctors mentioned is 227.

RESULTS OF TREATMENT.

Except where the treatment is being carried out for long-existing chronic disorders, signs of improvement will be seen very early in the majority of cases. For instance, in mild cases of gout with depression and irritability, a change will often be seen in from three to six days. There is an early improvement in the patient's expression, complexion, and mental condition. He feels brighter and more hopeful, even in cases where a long course of treatment may be necessary. The complexion is a good guide. It is not uncommon to see pale, gouty, and livery people take on a healthy appearance within ten days. In the list that follows perhaps the cardiac group showed the most dramatically quick improvement. For instance, all the anginal cases lost their anxious expression within five days. Even in hopelessly crippled cases of rheumatoid arthritis some degree of comfort is often obtained, with some signs of increase in vigour as their sleep becomes less disturbed.

Acute Infection Group.

The cases under this head may be classified as follows.

Pneumococcal Meningitis.—A boy, aged 3½, had a severe attack of pneumonia and developed meningitis, with typical signs and symptoms. The fluid obtained by lumbar puncture was examined bacteriologically and confirmed the diagnosis. Treatment was begun four days after the report was received, and continued for a week without much change in the child's condition or temperature. During the second week the temperature began to run lower and he was taking food more easily; it was still lower in the third week, with increasing strength and less rigidity, less meningeal cry, and more appetite. The temperature became normal in less than four weeks. At the end of the sixth week he was able to feed himself; rigidity was hardly noticeable, and he played with his toys. He left his bed a month later. The strength of the potassium permanganate was doubled at the end of the third week, with apparent benefit; on an average he received two injections of four ounces of this fluid daily, and they were always retained. On several days three injections were given (whenever a rigor occurred), and he took daily doses of thyroid extract equivalent to 1 grain each week.

Cerebro-spinal Meningitis.—A girl, aged 11, was admitted to hospital with a temperature of 101° F. She had been ill for over a week with marked rigidity, and was covered with petechial rash. She showed the gravest symptoms. This treatment was used, and her temperature dropped at once to normal. It was continued for the next ten days, and the temperature did not rise again. The rigidity was passing off on the fourth day, and on the seventh she was able to sit up in bed, with only a few marks left on the skin where severe haemorrhages had occurred. She made a complete recovery.

Acute Bacillus coli Infection.—A man, aged 60, had a sudden rise of temperature to 103.2° F. Bacteriological examination of the urine twenty-four hours later showed that he was suffering from a severe infection. Two injections were given daily, from time of onset. Slight signs of cystitis disappeared in three days, and the temperature dropped to normal. A specimen examined sixteen days after seizure was sterile. There has been no return of the disorder during the past four months. No thyroid extract was given during the inflammatory attack.

Two cases of chronic *B. coli* infection are reported as follows:

A lady, aged 29, for two years had chronic *B. coli* cystitis, which had not responded to treatment in spite of treatment in bed with alkalis, boric acid, urotropine, and the usual diet. After three weeks' treatment she began to have less discomfort; six weeks later the pathologist's report showed the urine to be sterile, and it has remained sterile for six weeks.

A man, aged 62, had suffered from *B. coli* infection, with chronic cystitis and occasional rigors, for twelve years. All treatments, including vaccines and urinary disinfectants, had proved useless over a long period. He began treatment eight months ago, during a rigor, when his temperature was 103.2° F. The temperature sank below normal in two hours. He has continued treatment for six months, and has had no rigors or cystitis, but finds it necessary to continue the cachet method of treatment daily, together with his thyroid extract; for, if discontinued for a few days, pelvic discomfort returns, with neuritic pains in the legs. His anaemic complexion has become a healthy, seaside one; his hair has grown considerably, whereas he had been very sparsely covered for some years.

Diseases of Joints.

Recent infections of joints are often rapidly controlled, whereas long-standing cases of chronic arthritis with deformity are difficult to influence for the better, if at all. The number of cases treated in this group was 36 (acute rheu-

matoid arthritis 3 cases; chronic rheumatoid arthritis 33 cases).

Acute Rheumatoid Arthritis.—Of the three cases in this group all were cured. If the complaint has only been present for two or three weeks two injections daily, for five or six days, will sometimes arrest it; and when continued once a day for the ensuing week, and on alternate days during the third week, the joints may be found quite normal and free from pain. This rule also applies in cases when an acute infection has occurred upon long-standing disease. The increased pain and swelling of the fresh infection will often quickly disappear; and, in some cases, the improvement will be continued to a point of a reduction being made in the original deformity. The following case is recorded as an example.

A woman aged 49. Her trouble began four weeks previously with a rise in temperature to 101.2° F., with diarrhoea, supposed to be due to a chill. No notice was taken of it. Three weeks later the finger-joints, wrists, and knees became much swollen and painful; there was a slight temperature. She had been very anaemic for fifteen years, for which she was frequently treated without success. After eight days' treatment the swelling and pain had gone, and her anaemia had been replaced by a good colour, which she has retained, without any return of the pain or swelling, for the past six months. The treatment was continued in her case for three weeks in succession.

Chronic Rheumatoid Arthritis.—Of the 33 cases reported 8 were cured, 14 relieved, and 11 not improved. Some cases of many years' standing can be expected to improve greatly. Much will depend upon the general condition of the patient's health and the degree of deterioration which has occurred, as evidenced by radiograph, and on the degree of ease and rest obtainable by the patient during treatment. Careful nursing home type of management will give better results than irregular domiciliary treatment. Much, too, will depend upon the individual's temperament. Those who are patient and submit to care, with restricted dieting, will do better than the impatient.

A woman aged 51. Watched for eighteen years, with slowly progressing increased swelling of joints, chiefly affecting the finger-joints and knees. She had difficulty in walking and rising from her chair. She was often treated with courses of thyroid extract without benefit. She paid many visits to spas, and had electrical heat, vaccines, and other treatments. After three months' treatment her hands are much more comfortable, the knees less swollen with freer movement, but bony alteration precludes perfect movement ever being obtainable.

Heart Diseases.

Three cases of cardiac failure are reported (the ages ranged between 66 and 73) with advanced anasarca, and described as "*in extremis*"; they had ceased to react to tincture of digitalis; rapid relief ensued a few hours after the first injection. The dropsy disappeared quickly, and all of them were able to leave their beds after one week's treatment. With the help of small doses of tincture of digitalis and one injection weekly they have been kept comfortable, able to move about their houses, and, in one case, do some light work in the garden for a few hours each day.

Cardiac Asthma and Dropsy.—A woman aged 66; a very serious and advanced case. She was striving for breath, and was loaded with dropsy to the extent of hard board-like abdominal walls. There was no valvular lesion; no albumin in urine. The pulse was small and running. She was pale, cyanosed, and looked anxious. Albumin had been present in large quantities, three months previously, when a milder degree of cardiac asthma was noticed and warded off by rest in bed for five weeks. One injection of half a pint of the standard solution was given and retained for ten minutes. It was quickly followed by free diuresis, and the asthma was noticed to be lessening in from three to four hours. A second injection was given twelve hours later. Diuresis continued, and asthma was hardly noticeable at the end of twenty-six hours. Two more injections were given during the next twenty-four hours; then one daily for four days, when no dropsy was visible. She was out of bed and walking in her room on the seventh day. She was given 1 grain of thyroid extract twice daily, and tincture of digitalis, ♏ x, twice daily. A weekly injection is found necessary to keep her free from dropsy.

Angina Pectoris.—Five cases are reported; all of them were cured; four were diagnosed by well known consulting physicians. They were in various stages of the complaint, one having suffered from the disorder for over five years. All obtained relief in less than one week. In two of these cases, where injections had been regularly carried out twice daily, relief from pain and oppression was experienced in four days. Seldom do they find it necessary to resort to their customary remedies as time goes on.

A woman, aged 52, had suffered from "indigestion" and muscular rheumatism for many years. She spent most of last winter in the South of France, chiefly in a nursing home, lying in bed for many months, and was definitely declared to be suffering from angina. She was brought to this country as a "cot" case. It required very little exertion to bring on the pains, and she was seldom if ever free from the anxiety and feeling of cardiac oppression experienced in this disorder. The feeling of oppression and dread had almost entirely gone after four days' treatment. At the end of three weeks, with two injections daily, she had only experienced one slight attack of pain since it was begun. Her colour began to improve about the tenth day. Nine weeks after beginning treatment she had a very good colour and was able to take longer walks than she had done for some time. As there was a history of myxoedema and other signs of advanced subthyroidism in her family, her dose of thyroid extract was increased to 5 grains after two weeks' treatment. At the end of seven months' treatment she still continues to take the same dose of thyroid extract and an injection every third or fourth day. She has no signs whatever of angina, and is living a healthy out-of-door life.

Disorders of Pregnancy.

Morning Sickness.—Four cases of this disorder are reported as having done particularly well. One was showing alarming symptoms. She was a primipara, aged 23, whose vomiting had become so severe at the end of the third month that even drinks of water were being returned. After one injection a great improvement was noticed; and after three days' treatment she was able to take ordinary diet. This method is not so successful in cases where the sickness has developed in the later stages of pregnancy.

Eclampsia.—One case of this condition is reported as follows:

A woman, aged 26, was found with a white swollen face and distorted eyelids. She was holding her head and complaining of terrible headache. She said her sight was affected and that she was going blind. She was slightly delirious, had not slept for fifty-six hours, and had been perambulating the room for two nights. She had been vomiting frequently for two weeks, and had suffered from occasional nose-bleeding. Her limbs were dropsical, deep pitting being made by pressure over the tibia; she was expecting her confinement in a month. An injection of 2 grains of potassium permanganate in 1½ pints of water was given at once. She retained a pint for ten minutes. She left the bed and returned the injection followed by a chamberful of urine. She immediately declared her headache had gone; she said she could see quite well, took a drink of milk, and fell asleep twenty minutes after the injection was given. She was awakened every two hours for a similar injection. Visited seven hours after the first occasion, she was found sitting up in bed, drinking a glass of milk, smiling, and said she felt better than she had done for weeks. There was only slight evidence of puffiness in her face, and no pitting could be obtained over the tibia on pressure. Nine hours later she was confined, without giving any concern to the nurse or trouble to herself. The urine, tested before the injection was given, contained only the slightest trace of albumin; there was none on the following day. She received an injection twice daily for a week, and a daily injection was given for one month. The infant throve very well.

There are two cases of the pre-eclamptic condition. One is reported in the following words:

A woman aged 30. After her last confinement she had a large haemorrhage which had left her very anaemic, with breathlessness and oedema of ankles and legs, with a large amount of albumin in the urine. She was apparently not treated for the condition, and came with the above symptoms when eight months pregnant. Injections were given, and thyroid extract 5 grains daily. After one week the urine contained only a trace of albumin, and the oedema had gone. The general condition gradually improved. She was delivered at full term of a healthy child, without complications.

The second case is more interesting, as she had suffered from actual eclampsia with convulsions over her confinement four years previously. She was carefully watched throughout her seventh and eighth months. Early in the ninth month she had feelings of dizziness with headache. The urine contained a slight amount of albumin. She was immediately treated with injections of the standard solution, twice daily for three days. She could not retain more than half a pint. The headache, dizziness, and albumin disappeared on the third day. The injections were given once daily for the following ten days, and continued every third day till she was confined. On this occasion she has had an abundant supply of breast milk, and a contented infant whose weight has increased by 1 lb. in his first twelve days of life. Over the previous confinement she had a poor secretion of milk, and, as the child did not thrive, weaning was required at an early date.

Disorders of Metabolism.

Acute Gout.—The following case, in which the condition had been present for many years, is reported.

A woman, aged 66, had often attended over a period of twenty years for acute attacks of gout, accompanied by gouty patches of eczema, chiefly affecting the shins. Recovery under ordinary treatment was slow, and there were early recurrences. Three days after

treatment was begun the vividness of the blush and area of the eczema were reduced by nearly one-half. The swelling and pain of the ankle-joints had entirely gone by the end of the first week. In less than three weeks a normal condition was restored. She has had no return of the complaint at the end of six months, and she keeps the eczema in abeyance by one or two injections each month. No alteration was made in diet, or other remedy used.

Diabetes Mellitus.—Two cases of this disease are reported as follows:

A man, aged 54, had been under treatment and observation for four years when the onset of disease was first noticed. Throughout this time his weight had very slightly varied between 12 st. 10 lb. and 13 st. 3 lb. On May 17th of last year he suddenly became much weaker. He lost 11 lb. in weight during the last three weeks of May, and was confined to bed for about ten days. He looked as if insulin would have to be given at any time, and had heavy acetone odour in his breath, and a constant cough. The treatment was begun on June 1st, and in sixteen days his weight had increased by 10 lb., while still on his usual diabetic diet. His colour and vigour rapidly improved, but there was no alteration in the percentage of glucose. Seven months later he is found ruddy coloured, 15 lb. heavier than he was at the end of May, with still no change in percentage of glucose. This result is the more interesting when it is considered that he took 2 grains of thyroid extract daily for the first two weeks of treatment. Another significant feature about his case was the quick relief he had from a persistent pruritus from which he had suffered for some years before he developed glycosuria.

A woman, aged 63, with 6 per cent glucose, and who has persisted in taking ordinary diet during the last three years, in spite of her disorder, has increased her weight by 4 lb. after seven weeks of the treatment, taken in the cachet form. The percentage of glucose has been reduced by half. No thyroid extract has been given in this case.

Disorders of the Digestive System.

Gastric Ulcer.—The following two cases of this condition are reported.

One, a man aged 53, who had a very severe haemorrhage in December, 1916, and who had the operation of gastro-enterostomy in the following month, was taken in hand immediately after a severe haemorrhage in August, 1924. He had had a similar recurrence in August, 1922, from the effects of which he took nine weeks to get over. Injections in the latter recurrence were given twice daily, and no other treatment besides careful dieting and a few doses of morphine. He left his bed at the end of a month, looking very much better than he did after the attack in August, 1922. Injections have been continued, once weekly, for the last three months. He is looking stronger, and is weighing heavier than he has done for the past five years. His diet has not been restricted in any way, and he is taking cod-liver oil, with occasional doses of a finely graded powder containing sodium bicarbonate, calcium carbonate, and magnesium carbonate, 20 grains of each, occasionally after meals.

The second case is a young woman who was treated by this method within an hour of her haematemesis. She did exceedingly well; left her bed on the seventeenth day, and has remained well for the last six months.

Colitis.—Five cases, all reported cured on an average in three weeks. One of these cases, a woman of middle age, had suffered very severely from the complaint for over two years.

Nervous Diseases.

Infantile Convulsions (Post-convulsive Condition).—The following case is reported of a male infant who was seen one and a half hours after having had convulsions.

A well developed child, aged 9 months, with no history of illness except slight diarrhoea during the past three days, with restless nights. When seen he was very excited and screaming; there was no rise of temperature. Two ounces of the standard potassium permanganate solution were given and retained. The screams and excitement stopped suddenly in two and a half minutes. His expression altered completely, and he became quite calm, smiled at his mother, and looked interested in the antics of a kitten. While sitting on his mother's knees his eyelids began drooping and he fell fast asleep within seven minutes from the time the injection was given. He remained asleep for three hours, woke up calm, and after having a bottle of milk a similar injection was given. He immediately went to sleep, remained asleep for eleven hours, and when seen twenty-four hours after his first injection he was described as being better than he had been for a week. No change of diet or other remedy has been needed during the two and a half months which have elapsed since this seizure.

Chorea.—A girl, aged 7, was quickly relieved of all symptoms after injections had been continued for from three to five weeks. She was the fourth of her family to be affected with the complaint, and her eldest sister had died of it, owing to cardiac involvement.

Sciatica.—Six cases are reported—three cured, two much improved, one slightly improved.

A man, aged 39, with twelve years' history of fibrositis in deltoids, infraspinati, and hamstrings. Relieved temporarily by courses of massage, etc. No evidence of infection in the accessory sinuses or teeth. Slight constipation. Blood pressure 110 mm. of mercury. After three weeks' treatment (during which all other treatments were stopped) the pains improved. After five months' treatment he is now more comfortable than for the past twelve years, although there is occasional discomfort in the hamstrings. (This is a doctor's description of his own case.)

Pulmonary Diseases.

Chronic Bronchitis.—Eleven cases have been reported, some of them accompanied by bronchitic asthma. All are described as considerably improved. One observer expresses the opinion that the treatment, in some cases, seems to act in preventing catarrhal conditions of the mucous membrane extending. Six of these cases are reported as having had the character of the sputum altered, a purulent appearance having become lessened in each case, though no bacteriological examinations have been carried out. The opinion seems to be that the younger cases obtain very great benefit, and are likely to be cured; the older patients are relieved considerably—they have less cough, less expectoration, and more rest. Their coughs are stronger, they can get rid of the expectoration more freely, and they are noticed, when moving, to be less wheezy. The patients express satisfaction—they feel better and stronger, and do not require so much "cough mixture."

Asthma.—Six cases are reported as having been cured, or relieved almost to the extent of cure. In the opinion of two observers the treatment acts as a preventive in the development of the complaint, when used early enough.

Skin Diseases.

A case where the condition of the foreskin and glans penis of a man, aged 61, was giving grave concern to those in attendance, on account of its malignant appearance, is reported as follows:

He had been suffering from a chronic balanitis for many years. For fifteen months before this treatment was used several different local applications and tonic remedies had been ordered without effect. The foreskin had become dull red coloured, indurated, and friable, with complete retraction impossible. The glans penis had developed several ulcerated, peduncular excrescences on its surface. By the end of nine weeks' treatment a normal condition was restored. A change began to be seen after two weeks' treatment. The colour and induration began to improve first; two weeks later a more velvety condition of the skin was noticeable, and all signs of discoloration had gone, as also the ulcerations.

Chronic Seborrhoea.—Several cases, both of the dry and moist variety, have been reported cured, and others relieved, whilst under treatment for various disorders. This has been accompanied by increase of hair in the baldness of men, and an increase of growth, with a healthier appearance of the hair, in women; this has been seen at various ages up to 70.

Pemphigus Foliaceus.—One case, in a woman aged 35. She had taken thyroid extract, and had been in a nursing home for close on four months, many remedies having been tried with little success. In less than a week after commencing thyroid extract accompanied by injections of potassium permanganate she began to improve and made a complete recovery.

Acne.—Four cases: three cured, one improved.

Acne Rosacea.—A man, aged 38, had suffered from this complaint since the age of 16. All forms of treatment had been used throughout his life. He improved slightly in hot weather, but in winter existed as a severe and disfiguring case. After two months' intermittent treatment there was very slight trouble this winter. (This is a doctor's description of his own case.)

Varicose Ulcers.—Three cases are reported, all of which healed rapidly.

One, a large ulcer on the lower third of the leg, which was very septic and odorous, and which had existed for over two years, was clean-looking and odourless in four days. At the end of a week large and vigorous granulations were seen to be springing from the base. At the end of two weeks the granulations were covering with healthy skin in its whole circumference. As the granulations began to heap in the centre, after about the tenth day, the ulcer was irrigated twice daily by a weak solution of permanganate. Rapid subsidence of the granulation occurred, and a healthy integu-

ment had spread across by the end of the fourth week. No other treatment was used with it except a little boracic ointment and light bandaging.

Goitre and Myxoedema.

Myxoedema.—Three advanced cases of this complaint seem to require less thyroid extract than the average dose which is given to keep such cases in moderate health. What is chiefly noticeable is that they have some colour in place of the usual anaemic appearance presented by those receiving thyroid extract only.

Parenchymatous Goitre.—Four cases are reported to have quickly responded to the treatment, two of them without the use of thyroid extract. One is inclined to relapse, unless she keeps up the treatment occasionally.

Exophthalmic Goitre.—Three mild cases find themselves very much better, with increased weight, and diminution of symptoms, after a few weeks' to a few months' treatment. Two advanced cases describe themselves as "less nervy," and the swelling of the neck has diminished in size. One case of enlarged thyroid gland is reported as having been on the point of having the operation of thyroidectomy, but shortly after the treatment was used operation became unnecessary. In another very severe case no relief at all was obtained after five weeks' continuous treatment, with injections.

Diseases of the Breast.

Chronic Mastitis.—Three cases are reported. Two had been operated upon during the previous two years. One had a severe recurrence in the affected breast, which disappeared entirely by this method of treatment in eight weeks. The other had both breasts badly affected. In this case complete disappearance resulted after less than seven weeks' treatment. The third case is interesting, inasmuch as, after seven weeks' treatment, a small cyst became easily discernible in place of a thickened tender mass which had existed at the beginning of treatment; but this cyst disappears, and the tender mass returns, on cessation of treatment for from six to eight weeks. She also develops a typical chlorotic lemon-coloured complexion whilst the mastitis increases in size, but after seven daily injections her complexion clears and some colour appears in her cheeks. She is also interesting, inasmuch as her defective hearing is almost normal whilst she is taking the treatment, but she loses her hearing very soon after the treatment is stopped.

Composite Cases.

The following three typical examples, in which more than one pathological condition was present, are reported.

1. A man, aged 44, presented himself last September with a large pustular swelling in the left axilla, which required the usual surgical help. He was noticed to be paler, thinner, and with a more haggard and anxious expression in his face than was justified by knowledge of his circumstances and surroundings. He was also suffering from, and receiving treatment for, pain of pyloric origin after meals, for pruritus ani of a persistent nature, for heavy acne of the back extending from the neck to his waist, for which he had received many courses of autogenous vaccines and other remedies, and his scalp was so persistently irritable that shampooing was required weekly. Quick relief was given to the pruritus first; the indigestion disappeared at the end of the third week; threatening pustules in the axillae were found subsiding about the end of the fourth week. His head required less shampooing a few weeks later; his acne is now quiescent. His colour and expression have improved and his weight has increased by 7 lb. Beginning with two injections daily, he finds now that one every third or fourth day keeps him comfortable.

2. A married woman, aged 25, had been anaemic since the age of 16. At 19 the anaemia was more profound, in spite of treatment. From the age of 20 to 25 she had been listless, tired, always suffering from asthmatical bronchitis, and had a woebegone expression, with black rings under her eyes. She married three years ago and all the symptoms became intensified, to which was added a heavy leucorrhoeal discharge. Suspected to be tuberculous, she was further depressed by the thought she might have to enter a sanatorium. Beginning treatment last August, some colour was visible in her cheeks in nine days; the leucorrhoeal discharge was much lessened in a fortnight; vigour was returning; the cough and expectoration were less noticeable at the end of three weeks. Treatment was continued throughout the autumn, and when seen at the end of December she was hardly recognizable. Her weight had increased from 6 st. to 7 st. 1 lb.; her bronchitis and leucorrhoeal discharge had entirely disappeared; her face was full and round, her complexion better than the average woman of her age; her hair was healthy and her eyes brilliant. She gave up dancing at the age of 18; this winter she is attending two dances a week

3. A married woman, aged 24. Similar case to the above, but with the added infirmity of periodic fits of sneezing. Life had been made miserable by fits of thirty or forty sneezes in succession, often interfering with sleep. This had been going on for four years, in spite of the use of the electric cautery, which gave only a few weeks' relief when resorted to. These troubles have been removed, including the fits of sneezing, after three months' treatment.

A Warning.

By a method of treatment so easy and so cheap it will be readily understood that temptation exists for patients to pass on their prescriptions to friends. The writer knows of many instances of this, and he knows of many nurses having undertaken the treatment of cases similar to those they have attended under instruction. Irresponsible and ill judged treatment, given in this manner, is certain to lead to disaster at some time, for these two drugs can produce poisonous symptoms, as we all know. Besides which, if secret and uninstructed use is being made of this remedy, we shall be liable to be called to sickly, cyanosed, and collapsed individuals, who never were subjects fit for the treatment from the first. The writer is of opinion that those who prescribe it should order only a few pellets of the drugs at a time; that the prescription should be marked "Not to be repeated"; and that a copy of it should be kept for reference, as a check on the number of pellets used. In all cases it will be advisable to write instructions carefully, explaining how much of the standard 1½ pints of solution is to be injected on each occasion, and how often in twenty-four hours.

In a very small percentage of cases peculiar little local infections seem to become activated. People who are not in the habit of developing pustules or small boils will occasionally be found with a diminutive boil or two on their scalps, or somewhere on their bodies. These clear up quickly; nor has there been any need to stop the treatment, for wherever they have developed the individual patient has been one who has gained great relief from the treatment eventually. In this connexion it will be remembered that in his book *The Parathyroid Glands in Relation to Disease* Vines states that occasionally, when using parathyroid therapy in chronic infective states, certain septic foci have appeared to be activated which had shown no evidence of existence before the therapy was used, and this is perhaps what happens when the potassium permanganate is used in conjunction with thyroid extract.

In addition to the cases here noted I have received reports on a certain number of others which may be roughly classified as follows: Gynaecological, obesity, chronic gout, acidosis in children, pyloric spasm, chronic alcoholism, high blood pressure, epilepsy, neuritis, migraine (improved), lupus erythematosus, alopecia areata, seborrhoeic eczema, psoriasis, and certain eye diseases. These cases, some of which are as yet incomplete, I hope to report in a later communication.

The following is a list of the doctors from whom I have received reports of the results they have obtained with this method of treatment:

Dr. E. H. Crisp, London.
Dr. Cyril Dobie, Chester.
Dr. A. G. Duncan, Talke, Stoke-on-Trent.
Dr. W. Edgecombe, Harrogate.
Dr. W. M. Farr, Ellesmere Port.
Dr. H. T. Finlayson, Formby.
Dr. W. Hardy Fleetwood, Hadleigh, Suffolk.
Dr. S. W. Foster, Barrow, Chester.
Dr. W. H. Grace, Chester.
Dr. J. T. Grierson, Rock Ferry.
Dr. F. V. Hanratty, Huddersfield.
Dr. A. R. Jackson, Chester.
Dr. W. M. Kerr, Ellesmere Port.
Dr. F. C. Logan, County Mental Hospital, Prestwich.
Dr. R. W. McKenna, Liverpool.
Dr. R. MacLelland, Matlock.
Dr. J. Graham Martin, Liverpool.
Dr. T. W. Moreton, Bridlington.
Dr. W. A. Newall, Chester.
F. G. Norbury, F.R.F.P.S., Chester.
Dr. H. J. Norman, Camberwell House Asylum.
Dr. G. Okell, Winsford.
Dr. H. S. Pemberton, Liverpool.
Dr. Lionel J. Picton, Holmes Chapel.
Dr. F. C. Plummer, Liverpool.
Dr. Mona D. Roberts, Liverpool.
Dr. J. S. Kellet Smith, Cheltenham.
T. E. Stowell, F.R.C.S., Northwich.
Dr. Carlyle Sutton, Chester.
Dr. George Taylor, Chester.
K. V. Trubshaw, F.R.C.S., Chester.
Dr. George Wallace, Liverpool.
Dr. S. Wilkinson, Liverpool.
Dr. Arthur C. Wilson, Formby.
Dr. J. Cowan Wilson, Blantyre.

PEPTONE AND SERUM PEPTONE IN ASTHMA.

BY

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IN this paper I wish to put on record a few points on the peptone treatment, and to add something on serum peptone in asthma.* A note on the latter was published by me in this JOURNAL on September 27th, 1924.

Peptone acts by changing or desensitizing the interior of the body, so that the disease has little chance of attacking. It is found that some persons are better for this purpose than others in whom the anti-anaphylactic reaction is defective or even wanting. Those who have had much disease, and especially suppurative lesions, are resistant. The peptone (Armour's No. 2†) is given usually intravenously, and slowly, and when the patient is as free from asthma as possible. It has been stated by several observers (who have not used this method) that the intravenous use is dangerous. I may therefore affirm that in the thousands of injections I have made with this peptone there has never been a single case of accident. I must claim it to be absolutely safe, even for the youngest child. In some cases, certainly, the peptone may be given intramuscularly in doses of 7.5 per cent., especially in children and old weakly people. When this does not act satisfactorily, however, the intravenous use of the 5 per cent. solution should be made.

As a general rule, peptone overcomes any tendency to asthma derived from foods and animal epithelial substances, though if the latter be found it ought to be got rid of as far as possible. At the same time, peptone fails to affect the skin reactions. This is in contrast to what occurs after a pyrogenic dose. A young man gave a severe reaction to horse dander. He was treated (not for this) with typhoid vaccine, intravenously, which raised his temperature to 104° F. Next day it had fallen to subnormal, when the skin reaction to horse dander had entirely disappeared. This shows that a great desensitization had taken place, but the skin reaction shortly returned. Again, with small doses of peptone, the endothelial cells of the capillaries are first rendered slightly more permeable, quickly followed by a "blockade" in which the lymph is less and gets less concentrated to 9 per cent. below pre-injection level (Petersen[1]). The pyrogenic reaction, on the other hand, causes large molecular aggregates to pass through for a long time.

The skin reaction to peptone may be useful before beginning treatment, although I have had cases which contradicted it. Intravenously, 5 minims of the 5 per cent. solution is an excellent beginning, continued twice a week by an increase each time of 3 minims, until 26 minims (1.5 c.cm.) are reached. Continue the last dose for two more doses, which makes the tenth dose. By this time it will be found that there are three classes of cases. In one the patient is quite well, and usually expresses surprise at his condition; in another he is much better, but not yet well; and in a third he is but little better. In the first class it is only necessary to increase the dose by about 4 minims for two more doses, and then giving weekly 25, 20, 15, and 10 minims, when the treatment is finished. In the others, if the patient is standing the peptone well, go on increasing the dose to 2 c.cm., then 2.5 c.cm., or in some people even 3 c.cm.; then reduce weekly by about 10 minims to 33, 23, 13 minims. If, however, during this time the patient has an attack of asthma, reduce the dose considerably, say to 25 minims. Continue about this for two or three weeks, then reduce weekly to 15 and 10 minims. When the patient is weak and has severe attacks, the dose must be kept low. Failure with the peptone treatment is more often due to the practitioner's want of realizing the needs of a case. Each case requires careful watching, and sometimes one finds that thyroid extract (1 grain daily) or iodine (in hyperplasia of thyroid) or ovarian substance (5 grains) at the menopause, are all useful.

Some of these points may be illustrated by a few cases in which it is unnecessary to give the clinical details.

* This substance has been successfully used in other allergic conditions.

† This peptone is used because it contains the correct quantities of proteoses, and is free from histamine. Witte's peptone, which contains histamine, should not be given intravenously.

CASE I.

A lady, aged 53, began to suffer from asthma after influenza four years ago. The attacks were very sudden and severe, and were getting worse. She was sent to me by Dr. Windle of Southall. I gave her peptone up to 26 minims intravenously, and during this time she had no attack of asthma. She then got about 30 minims for a week or two, and it was reduced by 5 minims a week to 10 minims. Part of this time she was laid up with an influenza cold and high temperature. No asthma resulted, and she remains quite well.

CASE II.

A lady, aged 38, had severe asthma since 1913; an enormous quantity of expectoration accompanied it. She also had hay fever as long as she can remember. She was sent to me by Dr. Beckett-Overy. She had the same treatment as the last case and has never had the slightest asthma since. She had an enlarged thyroid, which was improved by iodine in small doses.

CASE III.

A man, aged 44, who had had asthma from the age of 5, was sent by Dr. Morley of Mill Hill, who had treated him with some intramuscular injections of peptone some time previously, which had benefited him considerably. His mother had asthma, and he himself has it every night. During the first nine intravenous injections he was quite well and had no nocturnal asthma. Then he took slight asthma, when the dose was reduced. This passed off, and the dose was slightly raised until in about a month he was able to take the usual dose, about 2.5 c.cm. During this month he was practically quite well and had no asthma. In the following month he got weekly small doses and is now quite well, and feels very fit during the day.

Sometimes the peptone acts very quickly, as in the following case.

CASE IV.

A lady, aged 51, who had been confined to bed with severe asthma for about three months, whom I was asked to see by Dr. Mould of Oakham, after the first injection or two of peptone entirely lost her asthma and got up. She also had 1 grain of thyroid a day and 5 grains of ovarian substance, as her menses were scanty and irregular. Dr. Mould has written that she "never has an attack of asthma, her chest is quite clear of râles, the pulse rate is normal; walks now three or four miles a day, and is getting stouter."

When bronchitis is present a vaccine may be considered. In this case first give peptone for about two weeks, which will render the patient well able to stand the vaccine, to which asthmatical patients are often very sensitive. This effect of peptone has been clearly demonstrated by Warren Crowe.[2]

Many asthmatic patients vomit when the attacks come on, and this often gives relief. There may be a rash also. These symptoms show the presence of a poison. But we are to a large extent ignorant of the mode in which peptone acts, especially when we consider the rapid cures, lasting a long time, produced by very small doses. The histamine fraction in Witte's peptone I held to be entirely useless,[4] and this has been confirmed by Abel and Geiling,[4] who found that only the alcohol-insoluble portion produced immunity. Evidently the passage of peptone into the blood is all-important. The proteoses do not enter the blood when swallowed. Vivi-diffusion experiments by Abel and others have shown amino-acids and also a non-soluble proteose in the blood, a proteose united with protein. This does not come from the alimentary canal, and when peptone is swallowed, especially when it contains some histamine, the effect is a considerable secretion of gastric juice, which is of importance in dealing with injurious substances.

SERUM PEPTONE.

In 1922 Dale and Kellaway[5] found that the normal guinea-pig's serum (2 to 5 c.cm.) could, after about two hours, protect a sensitized guinea-pig from an otherwise fatal dose of antigen. Dale thought this power was due to a detachment of antibodies from the cells into the blood; but some time afterwards Kellaway and Cowell[6] found this was not so, but that an entire disappearance of antibodies occurred from both cells and blood. Working also with Armour's No. 2 peptone, they found that in guinea-pigs sensitized to horse serum the circulating antibodies were reduced to one-third, while the tissue antibodies were unaffected. In the latter case, although the conditions for intoxication appeared to be unique, the animals withstood a dose of antigen two to three times above a lethal one for the sensitized guinea-pig. Now in man we do not get much result from the injection of 2 or 3 c.cm. of his own serum (a quantity in any case too small), but when his blood is incubated with peptone *in vitro* a change occurs in the serum and the peptone which renders the mixture highly suitable for the treatment of asthma.

When blood is drawn from a patient it becomes altered in quality just before it clots, getting temporarily poisonous. If, to the freshly extracted serum, agar, starch, or peptone be added, and the mixture incubated at 37° C. for an hour or two, the poisonous quality becomes greatly increased and permanent, owing to the production of anaphylatoxin. In making serum peptone it is always the patient's own blood that is used, more especially just previous to an attack. At first I tried adding peptone to the prepared serum and incubating, but I found that mixing the patient's blood with the peptone and incubating at 37° C. was best. The peptone solution (Armour's No. 2) is prepared by making a 10, 15, or 20 per cent. solution in physiological saline (10 c.cm.). The patient's arm is bound above the elbow, and a two-inch serum needle, over the end of which a small (two-inch) piece of rubber tubing is drawn, is inserted into a vein. The peptone tube is held under the tubing, and in about a minute 30 c.cm. of blood will have flowed into it, the tube being shaken gently all the time, then turned and twisted so as to mix the blood and peptone. If the vein is not prominent, or the blood comes only slowly, a 20 c.cm. syringe may have to be used. The tube, well sloped, is then put in the incubator at 37° C. for a few hours, or until the serum peptone has separated out. It is then removed and kept at room temperature until next day, when the serum peptone will appear as a clear solution, which is carefully poured (except the last part) into a bottle. If acid, it is neutralized with soda, and 0.5 per cent. phenol is added. From the 40 c.cm. about 14 to 18 c.cm. serum peptone will be obtained. Both the bottle and tube may be left for another day, if necessary, and pipetted or re-poured out. No measures involving any speed are adopted.

The 10, 15, or 20 per cent. solutions of peptone are made according to the case. In weakly delicate persons, having severe attacks, it is well to begin with the 10 per cent. and increase upwards if necessary. With strong persons the 15 and 20 per cent. solutions are used. Novy and de Kruif[7] state that serum much reduces the potency of peptone, and that the anaphylatoxin makes up for this reduction. Now it must be remembered that a 10 per cent. peptone solution represents 2½ per cent. over the whole mixture and the 20 per cent. represents 5 per cent. But whether the resulting serum peptone contains more or less we cannot tell as they are so combined. It is nevertheless true that 2 or 3 c.cm. of the 20 per cent. mixture does not produce reactions in man as a rule. The dosage is as follows when the patient is as clear of asthma as he can be: 0.5 c.cm., 1 c.cm., 1.5 c.cm., 2 c.cm., 2.5 c.cm., 3 c.cm., given twice a week intravenously. If the higher doses produce any reaction, reduce it slightly. Then give 2.5 or 3 c.cm. for two weeks, and 1.5 c.cm. one week, and 1 c.cm. the next week. The latter doses are given once a week. This is, of course, only a general statement. Great variations may be required.

This solution is used for cases which have not proved satisfactory to peptone alone. Of these I shall give a few.

CASE V.

A gentleman, aged 35, at the end of the war had been in Durban. He had had asthma since 1903. In 1908 and 1909 he had operations in his nose; these had no effect on the asthma. In Durban his asthma was very bad, and Dr. Thomson treated him with vaccines (autogenous) from the chest and also from the intestines. This gave him relief for two or three weeks. He was going then to England, and Dr. Thomson advised him to see me. I found him a healthy-looking man; he gave some reaction to horsehair and to pollen. I treated him with peptone, which suited him very well, and it kept the asthma away for about six months. Every six months he used to return for some more injections. Last year he got serum peptone—at first six injections, then after a little time he got eight injections. At first the chest was troublesome (for about two weeks), then the asthma entirely disappeared, and he has never felt so well as now.

CASE VI.

The next case is altogether different. A man, aged 50, suffered very badly from asthma for years. He was very stout; he weighed 14 st., and had been 19 st. He looked healthy, but was very subject to bronchitis. In 1917 he was advised to leave London for Devonshire, where he was better of asthma till August, 1920. Dr. Erskine-Collins of Watchet, Somerset, sent him to me, after failing to do him much good. He remained in London and I gave him eleven intravenous injections of serum peptone, after which he was much better and returned home. He has since written me to say that he is feeling very fit, and except for some morning trouble is practically free of asthma.

CASE VII.

A little girl, aged 11, was sent to me by Dr. Dunlop of Crouch End. After treatment with peptone her asthma greatly improved, but still she had a little. During the summer it returned somewhat, after the holidays, when she was put on serum peptone. The result was that she lost her asthma and continues well.

There are cases of asthma which prove very stubborn, and of such is the following one:

CASE VIII.

A lady, aged 53, was sent to me by Dr. Swindells of Grimsby. She had had asthma since 1909. Her father, grandfather, and grandmother all had asthma. She was thin and cachectic-looking, and had some cyanosis of her lips. She breathed asthmatically, and told me she was never really free from asthma. Now, without going into particulars, it may be said that Dr. Swindells tried peptone without avail, and then the serum peptone was used and given by her doctor for over three months, with moderate benefit.

The following may be added:

CASE IX.

A lady, aged 57, about fourteen years ago had asthma when in Greenock. The asthma was very severe. No effect from injections received at the time, nor afterwards. She was an intense sufferer, and went to live in Leicester in June, 1924. In July she saw Dr. Greer, who sent her to me. I asked him to try her with peptone, which he did, but gave it up as she was no better. She then came back, and I made serum peptone, which was sent on to Dr. Greer with instructions as to its use. Notwithstanding, she had several bad attacks the first two or three weeks. She then returned, and a fresh lot, stronger, was made, which was sent on to Dr. Greer. Then the asthma stopped entirely, and except for about one or two attacks she has been quite free. "She feels much better, sleeps soundly, and has no asthma."

CASE X.

This is the case of a boy, aged 6½. He was sent on from Sheffield by Dr. Young, with a history of asthma since the age of 9 months. The attacks last three days, and come on about every three weeks. He was a healthy-looking boy. Dr. Young was asked to try peptone, which he did, but the boy took his usual asthma attack just the same. The peptone, however, was only given a month, when he returned here, and I made serum peptone and gave him five injections. During this time he had no asthma. He then went north and took the serum peptone with him, which was given by Dr. Young as prescribed till finished, 1.6 c.cm. being the dosage. The boy has since been quite clear of asthma.

I may now add a case which shows that serum peptone may act quickly:

CASE XI.

This is a lady, aged 58, who has been subject to asthma for many years. She consulted me about three years ago, and, after peptone treatment, got much better—in fact she remained clear for a long time, except for a little now and then. During the past two or three months she had asthma every night and was obliged to inject adrenaline frequently. I made serum peptone (20 per cent. peptone) and after four intravenous injections by Dr. Gardner of Sutton Valence she entirely lost her asthma.

It has been mentioned that peptone produces anaphylatoxin on incubating it with serum. But it also produces a great deal more, and it is worth considering how far the anaphylatoxin goes in treatment. When anaphylatoxin is injected into a guinea-pig it produces anti-anaphylatoxin, and if the blood of this animal is injected into another guinea-pig the latter becomes immediately resistant to a dose of anaphylatoxin (Dale and Kellaway[8]). Now in the human subject an allergy differs greatly from an artificially produced sensitization, and it would seem from the minute doses of peptone often required that something else happens, which we are ignorant of, and which lasts a long time.

In man, the injection of 2 to 3 c.cm. of serum peptone does not as a rule produce reaction. Man resembles the dog in his anaphylactic reactions (Dean[9]), and according to Dale[10] the dog is not affected by a dose of its own anaphylatoxin. But the guinea-pig and other animals readily show effects from anaphylatoxin of man.* Anaphylatoxin does not appear if the mixture be heated to a point which destroys complement, whence it would seem that complement is necessary, but this has been doubted. The whole subject requires investigation. But the treatment is independent of this.

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* In some samples of serum and serum peptone sent to Dr. Teale of University College he found that in the guinea-pig 2 and 3 c.cm. of the serum were without any effect; but the dose of serum peptone (15 per cent. peptone) killed the animals, after one hour with a 2 c.cm. dose, and in ten minutes after a 3 c.cm. dose, preceded by jerks.

MENTAL SYMPTOMS IN AURICULAR FLUTTER.

BY

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THE following case is of interest from the point of view of the relation between the mental symptoms and the physical state.

A business man of middle age had for years lived a "high-pressure" life, had smoked heavily, and had been a steady drinker. A friend stated that for some weeks he had had occasional "heart" attacks and had complained of giddiness when crossing roads. On one occasion he had collapsed on climbing some stairs and was taken to a hospital, where he was detained for a few hours before being sent home. He had then stayed in bed for three weeks. Two days before he came under observation he had attempted to resume his work, but returned home early and could not say where he had gone or what he had been doing. He appeared not to recognize his friends, and kept anxiously inquiring as to the state of his affairs.

When first seen he walked with difficulty and appeared to be extremely confused, replied to questions in monosyllables and was quite unable to give any account of his symptoms. His pulse was rapid but regular, about 140 a minute, and the cardiac dullness was a little increased. The pupils were not quite equal and reacted a little sluggishly to light, but the consensual reflex and the reaction on convergence were normal. There were no labial, lingual, or digital tremors, and the tendon and cutaneous reflexes were normal.

On the following day he was perfectly clear and well orientated and could give a good account of himself except for the period of the five preceding days, which seemed to him to be almost a blank but for a great fear that he was about to die. He stated that he had been subject to fainting attacks for about a year, and that he had been ordered to lead a quiet abstemious life and to restrict his diet. He had lost weight in consequence and had felt much better in health, while the fainting attacks had become less frequent and less severe. Latterly, however, he had felt faint even when confined to bed. Tincture of digitalis was now prescribed, but appeared to have little effect, as the pulse rate continued to vary between 130 and 160. He remained clear in mind, but was often anxious and worried and had bad dreams at night.

I am indebted to Dr. C. F. T. East for the reports on the electro-cardiograms. The first report was as follows:

"The case is one of auricular flutter. The auricular rate is 360 and the ventricular 180 a minute. There is therefore 2:1 heart block. There is preponderating hypertrophy of the left ventricle."

The patient was now given Nativelle's digitalin subcutaneously in doses of 1/600 grain thrice daily. He improved considerably and became much less restless, but continued to feel faint at times. The pulse rate was still high and became irregular. The report on the electro-cardiogram was:

"The rhythm is now irregular and the intervals between the ventricular complexes are quite dissimilar. There is variation in the ventricular complexes. The regular sequence of P waves is not seen in this graph as was the case before. Instead there are a number of coarse deflections occurring irregularly. In some cases there is still somewhat of a resemblance to flutter in the P waves. The condition is now one of coarse fibrillation of the auricles somewhat transitional in type between true flutter and complete fibrillation. Preponderating hypertrophy of the left ventricle is well marked. This change may be the result of digitalis medication."

The injections of digitalin were now omitted and the pulse fell from 120 to 72. The next electro-cardiogram showed

"regular rate of about 72 a minute with very slight sinus arrhythmia. There is no delay in the conduction of impulses. Normal rhythm has now been restored and the impulse arises normally and pursues a normal course. The only abnormal feature is the preponderating hypertrophy of the left ventricle."

The patient appeared to be restored to complete health. The pupils reacted normally in all respects, and mentally he was alert and clear and had lost his feelings of anxiety. There was a history of syphilis thirty years ago and his blood was found to give a +40 Wassermann reaction. It was not anticipated, however, that the cerebro-spinal fluid would show a similar reaction with a large excess of cells and protein. The patient was given a course of 16 grams of tryparsamide, but the blood remained +40 while the cerebro-spinal fluid was +20 with 15 cells per cubic millimetre, 50 mg. of protein per cent., and a paretic Lange reaction of 5555543210. The patient has been at work for several months, and when seen recently did not show any physical signs beyond slight enlargement of the left ventricle.

Although dizziness and complete loss of consciousness are not uncommon features in auricular flutter, mental confusion of several days' duration is unusual. The mental picture of this case was extremely suggestive of general paralysis, except that the symptoms disappeared as the condition of the heart improved. Visceral hallucinations such as have been described by Head were absent.

Intensive treatment with digitalin caused the vicious circle to be broken and converted the flutter into fibrillation, which in turn was followed by a normal rhythm when the drug was discontinued.

PANNICULITIS: ITS SIGNS AND TREATMENT.

BY

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HARROGATE.

PANNICULITIS can be correctly defined as a chronic interstitial inflammation of the fibrous tissue, the peripheral nerves, and blood vessels in the panniculus adiposus. Stockman[1] prefers the somewhat lengthy term "chronic subcutaneous fibrosis," but Professor Salin had previously denominated the affection panniculitis, and most probably this concise term will be permanently adopted. The condition is quite common, and is not infrequently associated with fibrosis; indeed, it may be regarded as a superficial form of fibrositis, although it can be easily distinguished from the latter affection.

Unquestionably infection plays a part in the causation of some cases. There is generally a history of gastro-intestinal disturbance for months or years, which I regard as the predisposing cause in the majority of cases, and the exciting cause is usually a series of slight chills—not severe enough to confine the patient to bed. Although this affection occurs frequently in patients with neurotic symptoms, the question arises whether the panniculitis is not the cause of the neurosis. In a certain number of cases there are no symptoms referable to the nervous system. This fact must be emphasized, because the opinion is held that panniculitis is always associated with symptoms of neurosis.

There is a good deal of confusion regarding the signs of this affection. The description of the physical signs given by some writers is misleading. For example, one observer[2] describes hard nodular masses varying in size from a bean to a walnut; another[3] mentions that nodules were found running down among the branches of the brachial plexus; and a third[4] states that patchy areas of panniculitis give rise to thickening, and even tumours of a fibro-fatty nature. A nodule means a knot, knob, or lump. If this be the accepted meaning of the term, I have not met with a nodule in any case of uncomplicated panniculitis, and I have seen 86 cases during the last two years. Although it probably consists of pannicular deposits among the masses of subcutaneous fat, I exclude Dercum's disease from consideration, chiefly because it is not common, and the treatment of adiposis dolorosa is somewhat different from that of simple panniculitis.

Panniculitis occurs in small circumscribed patches, from about one to two inches in diameter. The seats of election are the supramammary regions in the female, the upper intercostal muscles (the left side being most frequently

affected, and, if both sides are attacked, the left is generally the worse), the costal margins, the abdomen, and over the fascia lata. Very occasionally patches may be found in other localities, but, apart from the fascia lata, as a rule they are confined to the trunk. Stockmau's description of the microscopical appearance is as follows:

"The fibrous tissue is found to be thicker and denser than normal with numerous fibroblasts; the small nerve twigs running through it are in a condition of interstitial inflammation, and the small blood vessels show periarteritis and endoarteritis."

These observations upon the morbid histology of a patch established panniculitis as a distinct entity and explain the character of the physical signs. There is not much to be felt. The sensitive areas are generally smooth; when they are uneven they give the impression of a conglomeration of small shot-like particles. If pressure is applied perpendicularly to the surface the tenderness is slight, but if applied from the circumference of the patch it is most marked. A patch is evidently an aggregation of smaller ones. When the patch is disappearing under massage it splits up into its component parts. The contour of these can be made out, and before they finally disappear they feel like small pin-heads. On picking up the skin and subcutaneous tissue over a patch between the fingers, it feels firmer and less elastic than normal tissues. If the sensitive area is compared with a healthy portion, the practitioner will soon acquire the tactile discrimination necessary to diagnose this affection.

The implication of the nerves produces the symptoms, which are aching pain in the affected part, tingling, stiffness after exertion, numbness, muscular lassitude, and often a distinct loss of energy. Sometimes in early cases the patient is not conscious of any discomfort until the patch (or patches) is manipulated during an examination. The characteristic sign is the exquisite tenderness on picking up the sensitive part between the fingers.

Errors of diagnosis are not uncommon: for example, a case of left intercostal panniculitis was mistaken for angina; a patch over the right costal margin for cholecystitis, and another over McBurney's point for appendicitis. It is comparatively easy to distinguish between a hyperaesthetic skin area and a patch of panniculitis. In the former a slight stroking of the skin produces tenderness; whereas in the latter lateral pressure causes more or less severe pain.

TREATMENT.

The first essential is to improve the digestion. Overeating or dietetic errors are usually the cause of alimentary irregularity. Secondly, to impress upon the patient the advisability of guarding against chills. If there is any septic focus it should be immediately dealt with. The fundamental principle of removing the cause, if possible, applies with special force to panniculitis. If the pain is severe, or interferes with sleep, a cachet consisting of magisal, pyramidon, and caffeine citrate may be given occasionally; otherwise drug treatment, apart from a digestive aid, is of doubtful value. The best treatment for this affection is skilled massage, given preferably by one who has obtained the Swedish diploma. I generally begin treatment with mild electric massage (d'Arsonval) and then go on to dry massage. In very sensitive ladies the masseuse uses a cream consisting of menthol, methyl salicyl, and cremor rosae. It takes a few weeks before the patches completely disappear. About once or twice a week it is sometimes advisable to substitute for dry massage a massage douche to improve the general health. Dry massage may become somewhat irksome, and a douche is always pleasurable. The vacuum tube (d'Arsonval) has a soothing effect upon the tender area, but the remedy to promote absorption of the effused inflammatory products is massage skilfully given—at first tentatively, and as the tenderness diminishes more vigorously.

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CONGENITAL MEGACOLON WITH ABSENCE OF VAGINA.

BY

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EXTREME constipation and distension of the abdomen present at birth as in the following case without organic obstruction, but with hypertrophied, dilated, and elongated sigmoid colon, are typical of the condition first adequately described by Hirschsprung.

M., a girl now aged 18, the second of eight children, was the only one born with abnormalities. The mother ascribes the daughter's defects to conception having occurred at a time of great distress caused by her first daughter's death from meningitis.

M. suffered from extreme constipation from birth—the midwife had to use aperients and enemata to get away the first motion, which was scybalous, and a doctor had to be consulted. The abdomen became greatly distended. When 5 years old colostomy—in the mid-line below the umbilicus—was performed by another surgeon, and then, for six years, injections had to be used three or four times a week and the bowels were only opened naturally per anum about once in three months. The mother says she could not afford a colostomy apparatus and by the time her daughter was 11 years old begged for something to be done.

On August 10th, 1917, I excised the faecal fistula with an enormously hypertrophied and dilated sigmoid colon. End-to-end anastomosis was done, and a tube passed through the anastomosis and stitched to the anus (Lane's technique). The large bowel not removed seemed almost normal in size but to have thick walls. Since then the bowels have acted naturally; the abdomen is not distended; there is no incisional hernia. The girl earns her living as a shop assistant.

Since she reached the age of 16 there have been mild attacks of abdominal discomfort, sometimes with vomiting, about every three weeks, but as menstruation did not appear she again came under my charge. No trace of vagina or of uterus could be found, even after deep incision into the perineum. The urethra is normal; the rectum roomy and unobstructed, and the secondary sexual characters, though backward, are definitely feminine. If she insists on getting married at some future date it is proposed to fashion from a segment of the ileum a substitute for the missing vagina (Baldwin's operation).

In the textbooks cases like this are not sufficiently separated from those with organic obstruction—for example, of 100 cases collected by Mummery organic obstruction was found in 23. The same authority says: "Curiously enough associated congenital abnormalities are apparently not common." Of his 100 mixed cases, only 15 presented some other congenital abnormality—in 10 abnormality of the anus; in 2 stricture of the colon; in 2 deaf-mutism; in 1 imbecility. Such abnormalities are nothing like so striking as those here recorded.

In another condition where hypertrophy of muscle is present at birth—congenital hypertrophic pyloric stenosis—there is also but rarely found an association with other congenital abnormalities (for example, club-foot). These two conditions—apparently closely comparable—were both first properly described by Hirschsprung. It seems idle to guess why, how, or when such defects arise. At any rate, we can summarily dismiss many of the hypotheses put forward to explain congenital megacolon, because they fail to take into account such facts as the absence of organic obstruction, the presence sometimes at birth of distension of the abdomen, as well as hypertrophy and dilatation of the colon, and the not rare extension of the dilatation right down to the anal canal, and because they do not throw the origin back far enough.

Probably at the present time the help of the sympathetic nervous system would be invoked: a "sympathetic block" might account for achalasia or for a zone of reversed peristalsis or of want of peristalsis, but it is very doubtful whether any neuro-muscular defect could produce hypertrophy even if it caused spasm. We can produce deformed starfish at will by shaking, needling, or otherwise interfering with the segmenting ovum. So in attempting to explain congenital deformities in the human species we can go right back to the egg stage—some "impression" on the ovum might result in an abnormal trophic control (nervous or chemical), with the result of overformation of muscle. At any rate, in the present case the mother was on safer ground than is usual in placing her "maternal impression" at the time of conception.

Even as regards the treatment of megacolon, there is much difference of opinion. In the case here related treatment was of necessity surgical: colectomy was demanded, and the result surpassed expectation.

Colostomy may be done as a first stage, but should, if possible, be followed by excision of the artificial anus with colectomy and anastomosis. Mummery advises the lumbar route for colostomy, saying that inguinal colostomy is very dangerous, as the heavy bowel tends to tear away, that a spur cannot be formed, and the obstruction is often not relieved, and that he has only found two cases in which any real benefit resulted.

Colectomy, no doubt, is a very formidable undertaking in a toxic, undernourished patient, especially in the presence of a faecal fistula; but most people would prefer to take the risk to passing adolescence and maturity in the alternative condition.

TREATMENT OF GENERAL PARALYSIS BY MALARIA.

BY

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DURING the past two years (from November, 1922, to November, 1924) 608 acute male cases have been admitted to this hospital. Most of the patients giving a history of syphilis, or showing signs and symptoms, definite or suggestive of a late specific infection, have been subjected to the diagnostic biochemical tests. The Wassermann and Sachs-Georgi tests have been applied to the blood and cerebro-spinal fluid, and the colloidal gold test to the latter. Of the two years' admissions, 89 (14.6 per cent.) have been diagnosed as suffering from general paralysis. This percentage may later prove to be greater, as many patients recently admitted have not yet been subjected to the various tests.

The youngest patient (acquired infection) was aged 27, the oldest 61. The duration of the attack before admission, as shown by change of conduct, varied from seven days to five years. As a cause of death general paralysis accounted for 44 out of 95 deaths in the two years—that is, 46.3 per cent., a remarkably high figure.

In November, 1923, the malarial treatment of general paralysis was commenced. Professor W. Yorke of the Liverpool School of Tropical Medicine kindly provided the mosquitos (*Anopheles maculipennis*) infected with an Indian strain of *Plasmodium vivax*. During the year 53 cases were treated. The infection was conveyed by the mosquito in 23 cases; by inoculation in 30 (intravenous 16, intramuscular 13, subcutaneous 1). The incubation period, measured by the appearance of parasites in the peripheral blood and the occurrence of fever, varied according to the mode of infection, thus:

	Average.	Shortest.	Longest.
Mosquito	14 days	7 days	20 days
Intravenous	7 ,,	4 ,,	19 ,,
Intramuscular	16 ,,	10 ,,	23 ,,
Subcutaneous	20 ,,	—	—

In two cases the incubation period following intravenous inoculation was four days.

(*a*) April 14th, 1924: Inoculation of 2 c.cm. of blood from donor during apyrexial period after six double tertian rigors. Pyrexia of 102° F. on afternoon of 17th; blood positive on April 18th.

(*b*) May 28th, 1924: Inoculation of 2 c.cm. of blood from donor after three single tertian rigors. Pyrexia of 101° F. on night of May 31st; blood positive on June 1st.

The infected patients were allowed to have rigors; ten was the number aimed at, but in thirty instances, owing to the poor general state of the patient, the malaria was cut short with quinine sulphate somewhat sooner. Thirty grains daily for three days were always given. Seven rigors was an average number. Spontaneous cure with disappearance of the parasites occurred in 8 of the remaining 23 cases (34.7 per cent.) after three to nine rigors. This percentage would probably have been greater had the malaria been allowed to run a longer course in some of the other cases.

It is generally considered that large doses of the arsenical compounds are contraindicated in cerebro-spinal syphilis. Doses of 0.15 to 0.3 gram novarsenobillon were given at first; this dosage was increased, and finally 0.9 gram was given intravenously at the height of the pyrexia. Seven cases were treated with this maximum dose and no ill effects were observed. The parasites became scanty within two days, but quinine in the usual dosage was finally given to clear the blood.

When remission in the general paralysis occurred it took place at any time; in some during the period of malarial pyrexia and in others as long as six months later.

Results of the 53 Cases Treated.

1. Complete remission ... ... 7=13.2%
2. Improving both mentally and physically ... 9=16.9%
3. Slight mental with improved physical health 17=32.0%
4. No change mentally or physically ... ... 5= 9.4%
5. Deaths from time of treatment up to one year after, including 6 who collapsed ... 15=28.3%

In Class 3 seven of the patients were bedridden, dull and confused, and wet and dirty in their habits; following treatment the mental condition improved slightly, but the physical change was marked. The patients put on weight, regained control of the sphincters, and were soon able to be up and about in the ward. Two patients have been in this state of partial remission for twelve months.

Relapses of the malaria have been frequent (14 up to date). Of the original 23 mosquito infections, 13 (56.5 per cent.) have relapsed, whereas of the 30 inoculated cases only one (3.3 per cent.) has relapsed. The relapses in the mosquito-infected cases have occurred at periods varying from twenty-one days to eleven months after. The usual three-day course of quinine was given, but in a number of instances two, and even three and four, further pyrexial attacks were observed.

Wagner-Jauregg,[1] Mühlens,[2] Kirschbaum,[3] and Grant and Silverston[4] have already pointed out the infrequency of relapse in inoculated cases of malaria. The high percentage of relapses in the mosquito-infected cases is similar to the percentage of relapses in the naturally infected cases of the late war—38 to 100 per cent. of relapses following courses of quinine (Yorke and Macfie[5]). It would appear that passage through the mosquito in some way produces an infection which is more difficult to cure than the inoculated disease, though the two infections would appear to be identical as regards the type and severity of the pyrexia and the blood picture. Following the hypothesis of Yorke and Macfie, the mosquito strain, whilst reacting to quinine, in many instances soon becomes resistant to the immune body; some parasites persist, though not found in the peripheral blood, there being a state of balance. Sooner or later the balance is lost by decrease or weakening of the immune body; the parasites multiply and relapse occurs, with or without a rise of temperature according to the reaction of the host. On the other hand, the inoculation strain responds to quinine, and would appear to be completely destroyed by the immune body formed. The question still remains, however, why patients infected by the mosquito relapse so frequently as compared with those inoculated under the same conditions. In these experimental cases it would appear that the mosquito strain is more resistant, rather than that there is variation in the capacity of the host to produce immune body.

Infection followed feeding by mosquitos, or the injection of malarial blood, in all cases treated, but in two instances there was no pyrexial attack, simply the appearance of parasites in the blood. Blood infection only, without pyrexia, occurred also in a third patient who already had had an attack of inoculated malaria. The circumstances are of interest.

CASE I.

The patient had been treated with malaria in a general hospital four months previous to admission to the Mental Hospital. He had had eight to ten rigors, followed by spontaneous cure, but parasites persisted in the peripheral blood. On January 7th, 1923, when malaria treatment was considered, the blood was found to be positive. Quinine sulphate, 10 grains daily, was given

from February 15th to 29th. Infected mosquitos were fed on February 20th, and thus 60 grains were given before the infection and 90 grains after. No pyrexia followed, but the blood showed scanty parasites from March 14th for a few days, thereafter becoming negative. On April 23rd parasites again found. From April 23rd to 25th quinine sulphate, 30 grains daily, was given. On May 24th an intramuscular injection of 2 c.cm. of infected blood was given, but no infection followed, the blood remaining negative.

CASE II.

The patient gave a history of malaria previously. On August 23rd, 1924, an intramuscular injection of 2 c.cm. of infected blood was given. No pyrexia followed, but the blood became scantily positive from September 2nd to 6th; thereafter it was negative. On September 16th the patient was again inoculated intramuscularly with 2 c.cm. of infected blood. The blood became positive from September 20th to 27th, but there was no temperature. On December 7th, 9th, 12th, and 15th intramuscular injections of 1 c.cm. of adrenaline were given, and on December 10th 1 c.cm. of milk. The blood continued to be negative until December 15th, when two infected cells were found in the blood film.

CASE III.

The patient was infected with mosquitos on November 23rd, 1923; double tertian infection followed; he was allowed to have twelve rigors. Quinine sulphate, 30 grains daily, was given from December 23rd to 25th. As there had been little mental change an attempt was made to reinfect on July 20th by intramuscular injection; no temperature followed, but the blood was positive from August 1st to 4th; after that it was negative. Even here, however, the parasites appear to have become resistant to the immune body, for there was relapse with parasites in the blood from August 24th to 30th, but no temperature.

SUMMARY.

1. The malaria treatment of general paralysis is justifiable and hopeful, provided the patients are in fair physical health. The earlier the case the better the prognosis. The treatment is contraindicated where the patient is likely to have a fatty heart or where there is poor physical health. It may be added that the administration of strychnine, with digitalin or strophanthin to steady the heart, is advisable and helpful, especially during the later pyrexial attacks.

2. Relapses of malaria do occur, but practically only in mosquito-infected cases.

3. Compared with infection by the inoculation of trophozoites, it would appear that infection by the sporozoites from the mosquito produces a parasite which readily becomes resistant to the immune body, and thus relapses frequently occur.

4. A previous attack of malaria would appear to induce partial immunity; although scanty parasites appear in the peripheral blood, there is no rise of temperature.

I wish to thank Professor Warrington Yorke for providing the infected mosquitos and for his encouraging advice; Dr. G. A. Watson, pathologist to Rainhill Mental Hospital, for assistance with the biochemical tests; and Dr. F. M. Rodgers, medical superintendent of Winwick Mental Hospital, for permission to publish these notes, and for his kindly supervision and guidance.

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CONGENITAL NYSTAGMUS.

BY

T. STENNER EVANS, M.B., B.S.LOND., D.P.H.,

FOCHRIW, GLAMORGAN.

THE occurrence of congenital nystagmus is sufficiently uncommon to justify the record of a series of cases in a single family in which the condition appears to be hereditary.

A woman, aged 55 years, recently consulted me about her eyesight. She had marked nystagmus of the lateral movement type, without rotary movements of the eyeballs or spasm of the eyelids. Her optic discs were pale, but beyond a moderate degree of presbyopia there was no visual defect. The woman volunteered the information that her father and grandmother (both of whom she remembered well) had always suffered from a similar condition. The patient had six children—five daughters and one son. Of these children, the son suffered from marked nystagmus, but with the exception of one of the daughters (who suffered from slight nystagmus) the female children showed no trace of the condition. The son married recently, and his young daughter has nystagmus. Hence it can be seen that in five generations of this family nystagmus makes its appearance, and is transmitted through both male and female members of the family. I cannot recall any instance of an abnormal condition transmitted so definitely both by male and female. In haemophilia, and in the muscular dystrophies, transmission of these diseases is through the female to the male, the female very rarely suffering from the condition.

Some points of general practical interest also arise in this connexion. Some time ago a coal-miner suffering from nystagmus endeavoured to establish a claim for compensation on the ground that his nystagmus was due to his occupation. It was subsequently discovered, however, that at an early age the patient had been seen by the surgeon who was now examining him for compensation. The surgeon's notes showed that the patient had suffered from nystagmus, which had manifested itself at an early age, before he entered a coal-mine. Hence the claim for compensation failed.

During the recruiting days of 1916 one of the male members of the family whose history I have outlined was called up by the army authorities for examination as to his fitness for service. The examiner noticed that the man had nystagmus, so in view of the man's statement that he was a coal-miner he told him that he was unfit for service. A careful examination, however, would easily have excluded miner's nystagmus, for apart from the movements of the eyeballs and slight nodding spasm there were no other signs to justify this diagnosis.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

GREEN TEETH FOLLOWING PROLONGED JAUNDICE IN INFANCY.

THE occurrence of green teeth following jaundice in infancy is so rare that the following case is worth recording.

History.

Caroline F. is now 2 years and 4 months old. She was born at full term after a normal labour. The mother, now 39 years old, enjoyed good health during the pregnancy and had no illnesses or fevers of any kind; she has had no miscarriages. The father is 44 years old, and is well. There are three brothers (aged 24, 18, and 14), and three sisters (aged 20, 8, and 4), alive and well; none of these children showed jaundice at any time. One sister (the third child) died when a week old; it suffered from imperforate anus, which apparently could not be relieved; it was not jaundiced. There is nothing else noteworthy in the family history.

C. F. was born jaundiced—"as yellow as a duck's foot" the mother said; the skin of the whole body and limbs was coloured yellow, and so were the sclerotics. The jaundice continued to be intense and quite constant for three months, then it became gradually less, but it had not entirely disappeared until the child was 7 months old. All this time the child was "fairly well in itself." The motions (two or three a day) were green, loose, and slimy for six months. The child for six months was given a grey powder each day. All that the mother can tell about the urine is that it stained the clothes a deep yellow for several months. The umbilical area was "septic" for three weeks after separation of the cord. At birth the child weighed 5½ lb., and it regularly increased in weight, so that at 8 weeks it weighed 8½ lb., at 24 weeks 13 lb., and at 1 year 21 lb. It was never at the breast, but was fed on cow's milk (diluted suitably) until it was 9 months old, and thereafter there were the usual additions to its dietary.

With the exception of the prolonged jaundice and "a slight bronchitis every time she cut a tooth," the child has had no illnesses of any kind. The first tooth, a lower incisor, was cut at 9 months, and teeth appeared regularly after that in this order: lower central incisors, lower lateral incisors, upper central incisors, upper lateral incisors, first molars, then, at 2 years, the lower canines, and lastly the upper canines (not yet fully erupted). The first tooth "came in green," and all the others have done the same.

Condition on Examination.

The child is well developed and well nourished, and weighs 28 lb. There is some rickety thickening of the bones about the wrists and ankles; otherwise the chest and limbs are well formed. Nothing abnormal was found on examination of lungs, heart, nervous system, or abdomen. The spleen is not palpable. The liver edge can just be felt at the costal margin. The urine and stools are normal. No jaundice is now present. Mentally the child is normal. The Wassermann reaction is negative.

I am indebted to Dr. Crombie, dental surgeon to the hospital, for the following report on the teeth: "The temporary teeth are stained green, to the extent of the whole of the crown of the central incisors, about three-quarters

of the crown of the lateral incisors, a good tip of the cutting edge of the canines, and fully half of the crown of the first molars. The second molars are not erupted. I think the staining is confined to the dentine, as the enamel at the cutting edges of the incisors seems to be free of stain. Still, it is quite possible that there is some staining of the enamel, and it will be interesting to see if this is so, or not, when you get sections, some years hence, of a shed tooth. The staining approximates very closely to the amount of dentine that has been formed at the period just after birth."

JOHN CRAIG, M.B., Ch.B.,
Assistant Physician, Royal Aberdeen Hospital for Sick Children.

NASAL DIPHTHERIA.

I HAVE recently been impressed by the large number of cases of nasal discharge which I have seen at the Birmingham Children's Hospital, in which nasal swabs have yielded the Klebs-Loeffler bacillus. These cases rarely exhibit general symptoms. The nasal discharge is usually bilateral, but in at least two cases it was unilateral.

There seems no particular characteristic whereby the disease can be recognized clinically. In no case have I noted a definite membrane on the nasal mucous membrane, though in two cases the nasal pus was coagulated, and in two others coagulated with blood. The other cases resembled chronic purulent rhinitis.

The importance of the condition seems to me to be twofold:

1. It is unwise to operate for tonsils and adenoids in ignorance of the nasal condition.
2. These cases are diphtheria carriers, and may be contributory to the prevalence of diphtheria at the present time.

Birmingham. F. D. MARSH, M.B., B.Ch., F.R.C.S.

SHOCK DOSES OF *B. COLI* VACCINE IN EXOPHTHALMIC GOITRE.

THE following notes are founded upon eighteen cases of exophthalmic goitre treated with shock doses of *B. coli* vaccine. The dose was 500 million. No case required more than six injections, which were given every seven days. At first patients were kept in bed for four weeks. Later this proved unnecessary, except in severe cases. Every patient had the classic symptoms. The benefit from the vaccines persisted long after the cessation of the injections. In nearly every instance *B. coli* were found in the urine. Every case resulted in cure. The vaccine treatment of simple goitre, in my hands, proved to be less successful. Four cases of exophthalmic goitre and one of simple goitre in a dog call for comment.

Case 1.—A lady who had lost 4 st. in weight and had been in bed for ten weeks was (1913) given an injection: three or four days later the pulse had fallen from 160 to 100. Six injections sufficed for recovery. To-day she is in perfect health.

Case 2.—This patient, in addition to exophthalmic goitre, had bacilluria, pyuria, and an infected right kidney. Her first symptoms calling for medical advice were those of appendicitis. After fourteen weeks in bed convalescence was complete.

Case 3.—In this instance the vaccine always caused a local reaction in the thyroid gland.

Case 4.—This patient had been treated by several physicians by, among other remedies, *x* rays. Six injections removed all nervous symptoms, with a gain, in twelve months, of 2 st. in weight.

The object aimed at was to produce a slight and fleeting pyrexia. On one occasion a dose of 1,000 million produced pyrexia of 102° to 103° for three days. This served no useful purpose; 500 million proved both safe and satisfactory.

The following instance of simple goitre in a dog is not without interest.

A spaniel was brought to me with a thyroid enlarged to the size of a lemon, which was causing dyspnoea. After a first injection of 250 million the swelling was reduced in a fortnight to the size of a Tangerine orange. After a further injection of 500 million the tumour in another fortnight was the size of a walnut. No more injections were given, and in eight weeks from the start there was no sign of the swelling. A year later the dog remains in perfect health.

Such a result does not point to a specific effect of the vaccine; rather does it indicate an alteration of the metabolic balance, the difference between health and disease. The following case points to a specific effect.

A girl, aged 14, with endocarditis and pericarditis, had been given the usual remedies, and also rheumatic vaccine. No effect was produced on the pyrexia; the urine contained *B. coli*. She was given 250 million *coli* vaccine. In three days the temperature dropped to normal, though it rose again at the end of another four days to the old condition of 102° to 103.5°. After injection of 500 million the temperature fell to normal for seven days. Thereafter weekly injections prevented pyrexia and brought about gradual convalescence.

Formby, Lancs. ARTHUR C. WILSON, M.B., Ch.B.

ACUTE CALCULOUS CHOLECYSTITIS AND MALIGNANT DISEASE.

As the carcinomatous condition in the following case was not apparent at the time of operation, it lends support to the opinion that cholecystectomy is the operation of choice for cholecystitis rather than drainage of the gall bladder; had the gall bladder not been excised the malignant condition would not have been detected.

A married woman, aged 60, was admitted to hospital on January 13th suffering from acute epigastric pain and vomiting. Both recti were rigid, particularly the upper half of the right, and the whole abdomen was tender. The maximum tenderness was over the gall bladder. Acute cholecystitis was diagnosed and laparotomy decided upon.

The gall bladder was explored through an incision splitting the upper fibres of the right rectus. She had suffered from previous attacks of a similar but milder nature, and this was apparent during the operation by the numerous adhesions around the gall bladder. When exposed the latter was found to be acutely inflamed, but small and very hard. The liver appeared normal. Cholecystectomy was performed, working from the fundus towards the cystic duct. The fossa was drained for forty-eight hours. She made an uninterrupted convalescence, and was discharged from hospital within three weeks of her admission.

Examination of the gall bladder after removal showed that it was acutely inflamed and contracted upon its contents, five mulberry-shaped calculi. These were not faceted, were about the size of peas, and mottled brown and white. In addition to the calculi, and lying near the fundus of the gall bladder, was a hard patch which cut like an unripe pear. This was thought to be carcinomatous, and histological investigation verified this assumption.

I am indebted to Dr. J. T. Bailey for permission to record this case, also to Dr. Norman Kletz, pathologist to this hospital, and to Dr. David Greig, conservator of the museum of the Royal College of Surgeons of Edinburgh, for kindly reporting on sections made of the hard area. Their reports agree that the hard area is a carcinoma.

This case appears to be of interest, in the first place, because it affords another instance of the association of gall stones with cancer of the gall bladder; secondly, because such an association, although undetected at the time of the operation, amply justified the performance of cholecystectomy; and thirdly, because the possibility of such association adds to the mass of evidence in support of cholecystectomy, as opposed to cholecystostomy, in the treatment of acute cholecystitis.

Stockport Infirmary. LAMBERT ROGERS, F.R.C.S.Edin.

A CASE OF TRUE EPISPADIAS.

A BOY, aged 15, was sent to me by Dr. Hornsby of Greenock. The patient's general development, both physical and mental, was rather below par. The penis was little more than an inch in length, but, except for the deformity and absence of the prepuce, was otherwise well developed and of fully normal diameter. The glans was well formed, and the ventral median raphé clearly defined, as it appears after circumcision. Thus there could be no question as to which was the dorsal and which the ventral aspect of the penis, and it was therefore clear that the penis was not twisted, and that the cleft was definitely on the dorsal aspect, from which it extended downwards, between the corpora cavernosa, to the position of the urethra. The cleft was deep and narrow, and ran from the normal urethral orifice, backwards through the dorsal aspect of the glans, to near the root of the body of the penis.

A simple flap operation was easily performed, and was entirely successful in removing the deformity and in forming the urethra.

JOHN A. C. MACEWEN,
Surgeon, Royal Infirmary, Glasgow.

Reports of Societies.

DRUGS AND SOLUTIONS USED IN LOCAL ANAESTHESIA.

AT a largely attended meeting of the Section of Odontology of the Royal Society of Medicine on February 23rd, Mr. J. G. TURNER presiding, a report was given by Mr. F. N. DOUBLEDAY on some experimental work which he had undertaken, with the help of others, on the drugs and solutions used in local anaesthesia.

Mr. Doubleday explained that his purpose had been, in the first place, to secure evidence with regard to the chemical structure and reactions of certain of the drugs so as to lay a more certain foundation of knowledge regarding their use and to enable dental surgeons and others to estimate more effectually the probable value of new drugs offered for their use. A second object of the experiments, which had extended over a year, had been to offer evidence as to the causation of minor discomforts, such as stiffness, swelling, and after-pain, which were, in his experience, the only ill effects following the use of local anaesthetics for dental and minor surgical operations. In the chemical part of the work he had been greatly assisted by his colleague Professor Gibson, of the chemistry department of Guy's, who had drawn out for him tables (which he exhibited) of the graphic structure of some of the local anaesthetic drugs which had been used; these included novocain, stovaine, alypin, atropine, and others. With regard to tests, Mr. Doubleday considered that the tables given in the second volume of Martindale's *Pharmacopoeia* were the best extant, but they were not absolute for all. There was no absolute test for novocain and other local anaesthetic drugs, and that was a serious drawback. He had hoped to have been able to dialyse solutions of novocain against other drugs and examine the filtrate, but that was prevented by the absence of absolute tests.

Some important experiments were carried out on the question of temperature and evaporation. A local anaesthetic solution was boiled, in the same way as for patients, and the solution was loaded into a syringe which had been previously boiled and allowed to become absolutely cold. A thermometer was kept in a tumbler of water at boiling point in order that the initial temperature of the thermometer should not in itself be a cause of alteration of temperature to the fluid in the barrel of the syringe. By using a cold syringe and a hot solution in that way the result was, as shown by a number of tests, within a degree of the body temperature. If the fluid in the containing mugs supplied for the purpose were allowed to boil furiously for one minute, or even for half a minute, at the end of that time only 2.5 c.cm. remained instead of the 3 c.cm. intended, so that the injection of this solution, which originally was approximately isotonic with the fluids of the body, became unduly concentrated, resulting in the swelling, after-pain, and stiffness of which patients complained. The same was true of test tubes. Long test tubes were best because any fluid evaporated recondensed on the upper part, and found its way back to the bottom again. Another point was the reaction of the glass itself upon the fluids. If the glass contained much soda then its effect upon the degree of alkalinity of the solution was quite definite.

Experimental work previously carried out had been along the lines of injection into the blood stream or into the heart. The effect produced by injecting into the blood stream was different from that produced by injecting into the connective tissue. Some might think that the material injected travelled along the course of the nerve until it came to the cells of the central nervous system; it was necessary, however, that the drug should come directly into contact with the protoplasm of the axis-cylinder process, and so inhibit its activity. Mandibular sensations—in their control experiments on man he and his co-workers had carried out many mandibular injections upon themselves—were definite under local anaesthesia: there was first tingling of the lips, and after five, seven, or ten minutes the tactile sensation of the periodontal tissue was "doughy"; the sensation of the pulp was the last to go. If, on one attempting to extract a tooth, the patient protested, an interval of ten minutes would enable one to extract it without protest. Sensation was restored in the inverse order to that in which it was lost, and this depended on the rate of diffusion of the local anaesthetic and on its linkage with the axis-cylinder process.

When considering the effects upon human beings, one came upon the complicated psychological problem, including the influence of the operator on the patient, the degree of alarm felt by the patient as to what was going to be done to him, and so forth, so that one could not get a standard. That was one of the reasons why frogs were chosen for experiment. It was necessary to avoid injecting towards the spinal cord, for if that were done the whole sacral nerves would be paralysed and double hemiplegia result. On using 1½ per cent. solution of novocain and adrenaline, it was found that the frog recovered from a 5-minim dose in from one to one and a half hours, and that was comparable with the recovery period of the human being. The dosage for the frog in proportion to the human was very heavy. The experiments showed that merely exposing the frog's heart or injecting the saline did not interfere with its action. With novocain and adrenaline 2 minims produced slight alteration in the heart, 3 minims showed a slowing of the ventricular contractions, with 5 minims the auricular contraction began to fail, and fifteen minutes later there was a great inhibition of the heart, and that became progressive.

His conclusion was that adrenaline and novocain produced a definite depressive action on the heart. Novocain alone caused the heart to drop a beat or two, but did not seriously affect it. Adrenaline alone, 1:20,000, produced a progressive slowing of the heart with failure of its auricular contractions. He had tried to find a more suitable drug to combine with adrenaline so as to minimize the effects of the latter. Caffeine failed to prevent the depressive action of the other drugs. Strychnine had been widely recommended as a supposed antidote to novocain and adrenaline, but it was powerless to stop failure of the heart. Trials of 5-minim injections of novocain and adrenaline with atropine resulted in the heart contracting vigorously. He was of opinion, therefore, that atropine was the best drug to combine with novocain and adrenaline to prevent the effects of adrenaline poisoning. The disadvantage of atropine was the resulting dryness of the mouth.

Mr. Doubleday showed a number of blood films which were taken after the use of local anaesthetics, and he proceeded to demonstrate that the best effect of local anaesthetics could not be obtained unless the injection was into connective tissue and muscle. He also showed sections of the kidneys of the experimental frogs, and the lecture was illustrated by a very large number of graphs and other exhibits.

Discussion.

Mr. F. STJ. STEADMAN expressed his admiration for the paper, and said that this kind of research was very much needed if the odontologist was to be sure of his facts. He had long been convinced that adrenaline had a definite action on the human heart. If 1/400 grain of adrenaline was given to a patient there was nearly always complaint of throbbing in the head and general illness. This was prevented by giving a smaller dose. He strongly supported what Mr. Doubleday had said about the effect of the composition of the glass: he had confirmed this by powdering glass and adding to it sulphuric acid. He was convinced also that there was a personal idiosyncrasy in the matter of these drugs.

Dr. A. LIVINGSTON considered that the frog was not an ideal animal upon which to base conclusions for the human subject; in the case of the smaller animals the time factor was so very much shorter. The time of general anaesthesia for a frog should be one-sixteenth that of the human subject. He also asked whether Mr. Doubleday was sure that the experiments were carried out under exactly the same conditions with regard to temperature, draught, moisture, and other physical conditions. It was clear that the danger drug was adrenaline.

Mr. COLIN KEAY asked whether Mr. Doubleday had found any relation in the results obtained when using potassium

sulphate instead of Ringer's solution. Before the war two Germans suggested the use of 0.5 per cent. of sodium chloride and 0.4 per cent. of potassium sulphate, and claimed that this increased the potency of the novocain almost to that of cocaine.

Mr. DOUBLEDAY said that at a previous discussion in the society he had mentioned that he had only had three patients who were specially susceptible to novocain poisoning; he had since had the opportunity of proving absolutely, in two out of these three, that the danger arose from the adrenaline, not from the novocain. In the doses used by dentists, however, he did not think it constituted a harmful factor. In answer to Dr. Livingston, he thought that the frog, being a cold-blooded animal, readily adapted itself to the heat and other conditions of the ordinary investigating laboratory. With regard to the point raised by Mr. Keay, among the other things inquired into was the degree of alkalinity and acidity of the fluids used, and he got two colleagues, one in London and one in Cambridge, to work this out; independently they got the same result—namely, that the acidity of the solution was 7.68. One of them had suggested that acid sodium phosphate should be added to the solution to increase its isotonicity.

PREVENTIVE CONTROL OF DIPHTHERIA.

AT a meeting of the Section of Epidemiology and State Medicine of the Royal Society of Medicine held on February 26th, the President, Dr. JOHN MCVAIL, in the chair, Dr. WILLIAM ROBERTSON, M.O.H. Edinburgh, read a paper on the preventive control of diphtheria.

Dr. Robertson, having remarked that the usual measures with regard to diphtheria had somewhat the taint of locking the stable door after the steed was stolen, and referred to the anxiety given to all public health departments by the presence of carriers, described the methods adopted in Edinburgh to secure a systematic immunization of the school population. Explanatory leaflets and consent forms were distributed to all scholars under the age of 10 years. Parents were asked to consent to a preliminary Schick testing, then, if necessary, three preventive inoculations and a final Schick testing. In the better class schools as many as 86 per cent. of the parents consented, but in the poorer districts the percentage sometimes fell to 40; when the percentage of consents was 50 or less a second appeal sometimes brought the figure up to 70. When skilled workers were employed and the co-operation of teachers secured, it was possible to make the tests at the rate of 100 to 120 an hour. It was found, as elsewhere, that the proportion of positive reactors was much higher in the better social strata. It also appeared that passing through an attack of diphtheria did not confer a lasting immunity, as judged from the Schick reaction. Experience had shown that in young children, aged 2 to 5, immunization could properly be done without a preliminary Schick test. From the preventive point of view it would be expedient to concentrate attention upon children of pre-school age. It was essential that the method should be applied only by trained persons.

Sir WILLIAM HAMER wished to have more information as to the results, in particular with regard to the New York experience.

Dr. O'BRIEN remarked that the mixture used in Edinburgh was, so far as guinea-pigs were concerned, much less toxic than that employed in New York. He referred to improvements already effected in the production of antitoxin, and looked forward to yet greater improvements.

Dr. S. MONCKTON COPEMAN remarked that in England, so far, only schools attended by the wealthier classes and Poor Law schools had made much use of the method. The higher percentage of immunes in the poorer classes was apparently due to more frequent normal exposure, because, in a higher grade school in Norfolk, where there was definite exposure to risk, the proportion of negative reactors had been found to be very large.

Sir GEORGE BUCHANAN hoped that it would be possible to ascertain whether the subsequent attack rate of the immunized children in New York was lower than that of those not immunized. He congratulated Dr. Robertson on this piece of work, and inquired whether reactions on inoculation had given rise to trouble, and whether it had been found necessary to warn parents.

Dr. MAJOR GREENWOOD deprecated any premature attempt to "prove" the efficacy of the process by statistics. At present the method should be regarded as a reasonable one—one to be accepted by intelligent people; in time a statistical assessment would be possible.

Dr. RANDALL asked whether immunization had reduced the number of carriers. Dr. TROTTER thought that the public health services in Scotland had a considerable advantage over those in England both by virtue of having somewhat greater powers and of being in closer contact with the people. Dr. HUME thought that the small size of Edinburgh compared with London, and the prestige of its medical school, explained the greater willingness of the population to follow medical advice. Dr. SCOTT thought that the variation of the proportion of natural immunes was one of the most interesting problems from the standpoint of immunology; the explanation by subinfection was not really very satisfying. Dr. FORBES said that Edinburgh stood alone in dealing with the school population. In the South the method had been practically confined to large institutions. Dr. REGINALD DUDFIELD remarked that, as in the matter of tuberculosis dispensaries, Edinburgh was doing pioneer work. He inquired as to the verification of a history of previous diphtheria, and also asked for information on the subject of carriers.

The PRESIDENT tendered his congratulations and those of the Section to Dr. Robertson. It was difficult not to be envious of New York. Probably the medical profession required more education, and he thought that Dr. Hume's remarks on the medical atmosphere of Edinburgh were highly relevant. He also deprecated any premature statistical "proofs."

Dr. ROBERTSON, in his reply, said that it was too early to give statistical results, but in a school which had formerly given much trouble no cases had occurred among the immunized. It had not been found necessary to issue warnings as to reactions. There were some reactions at the age of 10 to 11, but they were confined to slight rises of temperature and local induration. The method was not serviceable in the elimination of carriers: the carrier did not react. Histories of alleged diphtheria were verified from notification records.

THE CONTROL OF TUBERCULOSIS AND THE MILK SUPPLY.

THE general debate on this subject was resumed on Monday evening, March 2nd, when the chair was occupied by the President of the Section of Epidemiology, Dr. JOHN C. MCVAIL. (For report of opening of discussion see BRITISH MEDICAL JOURNAL, February 14th, p. 309.)

Dr. M. J. ROWLANDS gave a description of the methods he employed on his farm to keep his cows and pigs in a high state of health, placing in the forefront the feeding by means of fresh vitamin-rich foods, and abandoning the artificial cake feeding so common. The latter he found to be absolutely deficient in vitamin A. He said it was not within Nature's scheme that cows should be continually supplying milk for human consumption; it was only intended that they should supply sufficient for their own progeny.

Dr. STANLEY GRIFFITH spoke from the bacteriological side, and exhibited tables showing the high proportion of bovine tuberculosis in children under 5 years of age. In cervical gland tuberculosis at this period of life 85 per cent. showed the bovine variety, the adult percentage being 18.2. In bone and joint tuberculosis in children under 5 years the bovine proportion was 30.27 per cent., and from 5 to 10 years 23.5 per cent. At the same age 58.3 per cent. of cases of scrofuloderma with tuberculous abscesses under the skin were bovine. In the cases in which the bacillus had obviously entered by the intestinal tract, 80 per cent. were of the bovine form. He did not think the two types could be clinically distinguished.

Mr. G. P. MALE, speaking as a veterinarian, referred to the reduction in the proportion of reactors with improvement in the hygiene of the cattle and cowsheds. In one area 50 per cent. of reactors had been reduced to under 5 per cent. He spoke highly of the work in this direction which had been done by Dr. Stenhouse Williams. The increase in the price of Grade A milk need be only trifling, and reactors which were transferred to other localities should be kept in touch with, and samples of milk taken by inspectors in such districts with unusual frequency. He considered that the Tuberculosis Order should be reintroduced without delay.

Dr. STENHOUSE WILLIAMS gave an account of his work at Reading in raising the standard of hygiene and general cleanliness of dairies in Berkshire, and argued that the health of the populace would be immensely improved by the more general consumption of Grade A milk delivered in sealed bottles. He declared that the unjustly maligned farmer was really most anxious to do his best to maintain a pure milk supply. The speaker said he did not think the American system was suitable to this country. In the United States and Canada milk was transported over immense distances, and temperature extremes were much greater than in this country.

Sir LAYTON BLENKINSOP also spoke from the veterinarian point of view, and, while agreeing with Dr. Rowlands's attitude, thought that he attributed undue importance to vitamin feeding. The use of tuberculin for testing should be in the hands only of qualified veterinarians.

Dr. DAVID NABARRO said that in such a subject as this, with so many interests concerned, it was necessary to look all round the matter and move cautiously. Herds could undoubtedly be freed from tuberculosis, and kept free of the disease for a time; but this meant that the immunity to the disease of those cattle would be lowered. He was not convinced that it was desirable to free herds from tuberculosis. The taking of small doses of killed tubercle bacilli conferred an immunity against the disease, and this was constantly being done unconsciously. People working in sanatoriums were constantly immunizing themselves by small doses of antigens. The boiling of milk killed the bacilli, and even if a few survived they would not do harm. He agreed that no cow with a gross lesion of the udder should be used for milking, but was that embargo to be placed on all reacting animals? He expressed general agreement with the arguments advanced at the last meeting by Professor Cummins.

Dr. NATHAN RAW said that the provision of a pure milk supply was one of the most difficult problems of the time. It had been said that a million cows in this country were tuberculous, and that 5 per cent. had gross disease of the udder. Slaughtering infected animals would not help materially, as the young were continually being infected. Attention should be given to immunizing calves as they were born. He favoured the reintroduction of the Tuberculosis Order as soon as possible.

Dr. SCURFIELD maintained that the only way to keep a herd tuberculosis-free was to breed within the herd, as fresh importations quickly spread the disease. Mr. FREDERICK HOBDAY said it was most important that tuberculin should be procurable only by medical men and veterinarians. Mr. HENRY GRAVE urged that the only method of dealing effectively with the problem was to carry out the total eradication of tuberculous cows.

Sir WILLIAM HAMER said that the same methods of cleanliness and hygiene as had been so beneficial in the case of the human being should be applied to cattle, and from that he had great hopes. Sir LEONARD ROGERS emphasized the importance of the increasing consumption of Grade A milk, and related some experiences which he had in India.

The following resolution was proposed by Mr. MALE, seconded by Dr. RAW, and carried unanimously:

> "That this meeting of the Sections of Epidemiology and State Medicine, Comparative Medicine, and Disease in Children strongly urges the council of the society to press the Government to re-enact the Tuberculosis Order as soon as possible, with the view to reducing the incidence and mortality from tuberculosis in children and to providing a pure milk supply."

EMPYEMA.

A MEETING of the Section of Medicine of the Royal Academy of Medicine in Ireland was held on February 6th, the President, Dr. F. C. PURSER, in the chair.

Dr. F. J. O'DONNELL described a series of cases of an insidious type of pleural empyema, in which the classical symptoms were absent. This type might be suspected only from: (*a*) the failure to recuperate rapidly after the crisis of lobar pneumonia despite the subsidence of acute symptoms; (*b*) the early onset of facial pallor with cyanosis of the lips; (*c*) constant increase of the pulse rate. The temperature chart might give no indication of the presence of empyema, but both debility and anaemia after pneumonia were always to be regarded as strong presumptive evidence of the condition. This type of empyema might develop slowly during convalescence, and physical signs confirmatory of the symptoms might be difficult to find in the early stages. The diagnosis of pus in the upper thorax might be particularly difficult, as in the case of a boy of 9, who was believed to be suffering from acute tuberculosis of the left upper lobe, but who eventually developed an abscess over the precordium, which ruptured and discharged completely at this site. The prognosis of pneumococcal empyema was good if diagnosed reasonably early and efficiently treated, but rapid pneumococcal septicaemia might occasionally produce a fatal issue. In treatment the series of cases supported the conclusion that patients acutely ill, or in a low condition, withstood operative treatment badly, and that in such patients aspiration was preferable until the critical period had passed.

Dr. G. E. NESBITT said that Dr. O'Donnell had not referred to the use of *x* rays in diagnosis, which he had personally found helpful in all varieties of chest cases. He had recently seen a case of liver abscess, similar to the one described by Dr. O'Donnell, in which he had found what he took to be typical signs of empyema at the base of the right lung; on putting in a needle he had only found a little blood-stained fluid. By an *x*-ray examination it was discovered that the trouble was a liver abscess. An operation was performed, and a large quantity of pus came away; the patient did well for a time, but another abscess developed in the left lung. This also was drained, and the patient recovered.

Dr. J. SPEARES referred to the abnormal sweats which occurred in patients who had suffered from pneumonia and recovered. He had seen a good many cases of liver abscess, and said that even in cases of tropical abscess a little fluid was obtained, and there were usually also crepitations present. Out of eleven cases of this condition which he had seen he had only found cysts in one case. He had recently seen a youth, aged 19, who had become suddenly ill; the abdomen was rigid. There was no previous history of illness. A needle was inserted, and a good deal of fluid came away. It was decided that it was a case of empyema and an operation was performed, but empyema was not found. The boy died, and at the necropsy perforation was found, the fluid having apparently come from the abdomen. He referred to the difficulty of cases of double empyema, and agreed with Dr. Nesbitt that *x* rays in these cases were a valuable aid to diagnosis.

Dr. A. R. PARSONS had recently had a case of unresolved pneumonia, somewhat similar to the one described by Dr. O'Donnell. The patient, a man, came to the crisis, and his temperature rose afterwards, suggesting empyema. A radiologist was not certain whether fluid was present, so Dr. Parsons explored, with negative results. He then watched the case, and the condition gradually cleared up, but not for about five or six weeks. He drew attention to the importance of getting the surgeon to define the position of the pus after it had been found by the physician in cases of empyema, before any operation took place, owing to the difficulty in some cases of finding pus at the operation. He had seen a girl, aged 16, who on admission had a rash over her body; he could not determine whether there was pus or fluid present. No decision was obtained by an *x*-ray examination, so he explored, and withdrew about 1 c.cm. of pus, which was found to be purely streptococcal. He could not find any primary cause; although the girl was never drained she gradually improved and finally recovered.

Dr. D. J. CANNON was convinced that in cases of empyema, whether the infection was pneumococcal or streptococcal, aspiration alone would not cure the patient. On the other hand, if a rib was taken out at once the patient would probably die. The pus should always be examined bacteriologically; if it proved to be pneumococcal an operation should be performed at once, but if streptococcal it was wiser to temporize. The essential thing in the surgical treatment of this condition was efficient drainage; for this it was necessary to resect the rib and explore the cavity before putting in a drainage tube. He personally did not think it mattered whether open or closed drainage was used.

Dr. ELLA WEBB believed that *x* rays were the only certain aid in looking for empyema: the diagnosis between a tuberculous condition and an empyema was often difficult. She had seen a child, who had recently suffered from pleurisy, or what was said to be pleurisy. The child was very badly nourished, the parents were very poor, and the general appearance suggested tuberculosis. The occurrence of sweats with the history made the case very puzzling. She frequently saw similar cases: in some of them empyema was found, but other patients steadily grew worse, and at the autopsy generalized tuberculosis was found.

Dr. R. H. MICKS referred to a rare case in which the patient had measles and also typical empyema; on two occasions a diffuse growth of influenza bacilli was obtained. The patient was operated on; before it there was no fever, but after it the temperature rose.

Dr. L. ABRAHAMSON said he always had a vaccine prepared in cases of empyema, lest the opening should not close satisfactorily after operation, as in these circumstances he had found vaccines helpful. He drew attention to the danger of putting a needle into a case of abscess of the lung unless an operation was done very shortly afterwards. He mentioned a case in which a man was operated on, and it was found that the muscles of the chest wall were infiltrated with pus; gas bubbles escaped, and the patient afterwards died, probably of exhaustion. He had seen another case, in which, the *x*-ray examination being rather indefinite, an operation was performed for a subphrenic abscess, and an enormous quantity of pus came from the liver.

Dr. W. G. HARVEY did not think it was always difficult to get the needle into the pus, but in all cases where he suspected empyema he had a glass slide ready and blew any needle contents on to the slide for microscopical examination. By this means he had often found pus where he would not otherwise have done so. *X* rays were usually very useful, but in some cases even they failed. About a year ago he had had a case of a large empyema which was operated on; after the operation it ran a very unsatisfactory course, and he thought there must be some pus present. The patient was examined with *x* rays, but there was nothing abnormal seen. After the patient had returned home he coughed up about an ounce of pus.

Dr. V. M. SYNGE said that as loud breathing was frequently found in cases of empyema in children as in cases of consolidation. In children empyema was often primary, and not preceded, as in adults, by pneumonia.

The PRESIDENT referred to leucocytosis as an aid to diagnosis in cases of empyema. He also had found clear fluid in the pleura in a case of abscess of the liver. He thought the case was one of empyema, and persuaded the patient to be operated on, but before the operation was done perforation into the lung occurred and the patient died of acute pneumothorax. He had recently had two cases in which pneumonia in the lower lobe of the right lung had failed to resolve until after two months, when all the physical signs disappeared.

DEEP X-RAY THERAPY.

A MEETING of the Section of Pathology of the Royal Academy of Medicine in Ireland was held on February 20th, the President, Professor J. T. WIGHAM, in the chair.

Dr. L. CASSIDY read a report of deep *x*-ray therapy as practised by himself and Dr. Stumpf at the Coombe Hospital for nine months.

Dr. Cassidy stated that selected cases could be clinically cured, but cases which were surgically inoperable and had been sent for this treatment as a last resort were usually disappointing, only a very small percentage (15 to 20) of cures resulting. Gynaecology provided the most successful field of operation for deep *x*-ray therapy, and next in order came sarcomata. In post-operative cases, when properly treated, good results were obtained; 8 cases had been treated. In 8 cases of abdominal and general tuberculosis 2 patients had died after the first sitting, but they had had a poor prognosis from the start; 3 patients were cured. In general deep therapy *x* rays were not so efficacious as in gynaecology, but many inoperable cases could be cured, or at least benefited, by the treatment. Out of 10 patients with cancer of the oesophagus 5 had died and 3 remained alive, with satisfactory results. In one case a growth was present 12 inches from the teeth; a snipping from the growth showed it to be a squamous cancer. Under treatment the discomfort disappeared, the weight improved, and a radiogram showed the condition to be almost normal. In cancer of the stomach the prognosis was worst, but cancer of the rectum was more favourable. Many cases showed improvement as regards pain, and there was permanent healing in a small percentage. Of cancer of the face 3 cases were treated; one cancroid of the nose was cured, one epithelioma reacted to one radiation, and one remained under treatment. Good results were obtained in cancer of the upper jaw: 3 patients were treated; the first two had finished treatment and no tumour was now visible. Treatment was given to 4 patients with cancer of the lip, tongue, and mouth; glandular metastases were present in all. Improvement was obtained in all the cases. No success whatever followed treatment of 13 cases of cancer of the larynx, the difficulty being that the great sensitiveness of the larynx to the rays led to induration. In 6 cases of cancer of the pharynx only temporary improvement was obtained. One patient with cancer of the thyroid showed improvement, the tumour apparently becoming cystic. Many cases of sarcoma reacted favourably. Sometimes the primary tumour disappeared only to be followed by the appearance of metastases later. Lymphosarcomata reacted most favourably. In 4 cases of mediastinal tumour treated the results were very good, but bone sarcomata did not show any improvement. One case of laryngeal tuberculosis showed partial improvement, and treated cases of tuberculous glands in the neck were almost completely cured. A case of Basedow's disease showed some improvement after treatment.

The PRESIDENT considered that a great advance had been made in the treatment of malignant disease, even if it could only be said that by deep *x*-ray treatment the patients had been freed from pain for a few months, as had been achieved in some cases by Dr. Cassidy. Some of the patients had died soon after the treatment, and he wondered if this was merely a coincidence or had some connexion with the treatment. He referred to the difficulty of treating very advanced inoperable cases, and asked if squamous-celled carcinoma was more amenable to treatment than columnar-celled carcinoma.

Dr. W. STEVENSON referred to the number of hopeless cases in which some kind of radiation treatment was alone possible. All these patients must eventually die from cancer, since very often before they commenced radiation treatment the disease had spread over the system; all that could then be expected from treatment was that it would relieve the part of the body where the primary growth had started. He had found that by radium treatment he could prolong the life of patients, relieve their pain, and make them more comfortable; but it was a very different matter to cure them. There were many difficulties in radium treatment. Patients too often failed to come back for further treatment. He had been using radium in cases of tuberculous peritonitis for some time now with good results. He usually gave small doses of radium, and continued the treatment for a long time. He had treated one such patient for fifty-six days, and she ultimately recovered. In cancer of the breast radium treatment acted well; but he regarded this condition as a more or less superficial one which could be removed. He had treated a case of cancer of the bladder nearly three years previously; the patient had come in to see him recently, and was apparently quite

well. He felt that every patient should be given a chance of radiation treatment, because sometimes, even in cases which appeared hopeless, improvement was effected. The patients were made much more comfortable, and the mental relief also was very great; they realized that nothing else could be done for them and were very grateful for any alleviation of the pain. He had treated one case of cancer of the oesophagus; the patient had been much better for some time and free from pain; he had not died until nine months later. While he recognized that it was not a cure for cancer it was a means of combating the disease which would always be of use, and should never be cast aside. He thought that radium had some advantages over the treatment by deep therapy in that it could be given in very small doses and for a considerable length of time.

Mr. M. HAYES said that cases of cancer had been treated for many years by *x* rays before this method was adopted: some patients whom he had treated fourteen years ago were still alive. The newer method of deep *x*-ray therapy was introduced during the war, and he himself had only started to use it since last July, and therefore only in a few cases. There was at present a difference of opinion as to whether the treatment should be given without intermission, or whether it should be given with intervals between each treatment. There were points in the Erlangen technique which he could not agree with. He thought that the table of dosage suggested was likely to lead them astray; different forms of malignant disease responded differently to radiation, therefore in some cases large doses were required, while in others the dose had to be small. In cases of tuberculous peritonitis, unless the patient was in a condition to respond to the treatment, no good results would be obtained by deep *x*-ray treatment. He referred to a patient with cancer of the rectum, sent to him for treatment after the operation. He had received radium treatment, with the result that he was freed from symptoms and enabled to get back to work. He thought that without the operation the result would not have been so good. The results in carcinoma of the stomach were always bad, and always would be until some form of technique was invented which would save the suprarenals. In cancer of the parotid the results obtained by treatment by *x* rays were on the whole encouraging. Although by the use of deep *x*-ray therapy an advance had been made in the treatment of cancer, he did not think that it was going to solve the cancer problem. He thought it much safer to use radium for tumours in the region of the eyelid owing to the dangerous action of *x* rays in the rods and cones.

Dr. BETHEL SOLOMONS inquired as to the physical effects of deep *x*-ray therapy. Patients of his had refused to undergo a second application owing to the extreme discomfort suffered. He thought that the Government should be urged to allow *post-mortem* examinations in hospitals: the absence of these examinations retarded progress. With regard to cancer of the bladder, Paschkis had stated that radiation caused more suffering than the disease itself. An important economic problem arose in considering the question of deep *x*-ray therapy: should this expensive apparatus be constructed, or should the patients be treated with radium?

Dr. T. O. GRAHAM had seen no permanent good results in cases of cancer of the oesophagus, although he had had cases of his own treated by deep *x* rays, and also by radium; in some of them he had combined the treatments, but others had only had one or the other. In two cases the original growth apparently was cured by radium, but in a short time a second growth appeared lower down. He wondered if radium or deep *x*-ray treatment was likely to induce secondary growths by stimulating the cells to produce a growth if the treatment were not properly applied. He had had one case of cancer of the upper jaw in which there was proptosis and a very large secondary growth in the nose, which was reported to be carcinoma. The patient at that time seemed to be in a hopeless condition. He was blind in the proptosed eye, could not breathe through his nose, had very severe headaches, and was in great pain. This was about nine months ago; the patient was then treated by deep *x* rays, and when he came back, three months later, for further treatment there was no visible growth. In another somewhat similar case, in which the growth had not involved the eye, improvement followed treatment, though the effect was not so extraordinary as in the previous case. This patient had had three treatments, and the swelling of the cheek and the roof of the mouth had decreased, but there was still a growth in the nose, which bled readily on the application of a cotton swab. It seemed that the time had now come when a radiotherapeutic institution was required in Dublin.

Dr. JOHN SPEARES referred to a case of mediastinal tumour. The patient had definite dullness under the sternum, extending up to the right upper lobe. After the first deep *x*-ray treatment the patient was extremely prostrated, he suffered from pyrexia, and said that he felt "knocked out." After a second treatment he was still more prostrated, again suffered from pyrexia, and died about ten days later. At the autopsy it was found that the sarcoma commenced in the mediastinal region and extended up to the right lobe; the lung was breaking down.

Dr. CASSIDY, replying, said that in tuberculous peritonitis the treatment lasted for one hour—half an hour for the back and half an hour for the front. Three applications were given, spreading over a period of a month or six weeks, and then the patient was considered as cured. Both patients with cancer of the parotid gland had died; but two with cancer of the lower jaw had been treated, and he had heard that both of them were completely well.

ENCEPHALITIS LETHARGICA.

AT a meeting of the Cardiff Medical Society held on February 10th, with Dr. E. E. BRIERLEY in the chair, Dr. ABEL EVANS read a paper on encephalitis lethargica.

Dr. Evans pointed out that the view, widely held, that this disease was first observed and established as a separate entity by von Economo of Vienna, who studied an outbreak in 1916, and published a full report in May, 1917, neglected the fact that a more extensive outbreak had occurred in France in 1915 and 1916, from which a series of forty cases was recorded by Cruchet, Moutier, and Calmette, in April, 1917. It was not described in England until 1918, when Professor A. J. Hall and Dr. Wilfred Harris published their first cases. Compulsory notification was instituted in this country as early as January, 1919, with the result that the statistical records of the epidemic issued by the Ministry of Health were singularly complete. The epidemic could not be said to have already spent its force. The mortality was high: it reached 48.3 per cent. in a series of 1,273 cases reported by the Ministry of Health. If, however, allowances were made for the very large number of mild cases which were not notified, this percentage would be much reduced. It was universally recognized that the infectivity of the disease was low, but there was abundant evidence that it was of long duration. The pathological changes seen by the naked eye were slight, amounting in most cases to a congestion of the superficial vessels of the central nervous system. On section, similar signs of congestion and minute haemorrhagic points were found in the substance of the brain and cord. The grey matter showed these changes more than the white, and they were seen with greater frequency in such situations as the basal ganglia and mid-brain. The microscopic changes were constant in well established cases, the most obvious being perivascular cuffing. The perivascular lymph spaces about veins of a small size were infiltrated by mononuclear lymphocytes and occasional plasma cells. Other less constant changes were degeneration of nerve cells and proliferation of neuroglial cells. No organism had yet been isolated, but the disease was now believed to be due to a filterable virus. This virus had been obtained from brain emulsions in fatal cases and from the washings of the nasopharynx; by inoculation the disease had been produced in animals. The cerebro-spinal fluid showed very few changes: it was clear and colourless; in the early stages the pressure might be somewhat raised, and the cell count might show from 50 to 100 lymphocytes per

cubic millimetre. The onset of the disease was as a rule gradual, but it might be dramatically sudden. The nervous symptoms were due to a general or to a local disturbance of the central nervous system which caused either an exaltation or a depression of function. Delirium and lethargy were typical general disturbances, while involuntary movements and paralysis were typical focal derangements. Focal symptoms might occur with little or no general disturbance. Gastro-intestinal symptoms occurred in the initial stages of the illness. The tongue was thickly coated, the breath very offensive, the fauces were infected, and obstinate constipation was present in a number of cases. In children, moral and temperamental changes were the most important residua. No line of treatment having curative or preventive value had yet been evolved.

Dr. IVOR J. DAVIES referred to a case of a man, aged 58, who died, after an illness of one month's duration, from a tumour of the lenticular nucleus, secondary to a growth (lymphosarcoma) at the root of the lung. The physical signs bore a close resemblance to those of encephalitis lethargica, and were mainly of the general type (Walshe), with the negative signs of marked lethargy and Parkinsonian mask, as well as moderate ptosis, paresis of one external rectus muscle, and of the limbs of one side of the body. The ordinary signs of a cerebral tumour were absent.

PREVENTION OF PUERPERAL DISEASE.

AT a meeting of the London Association of the Medical Women's Federation held on February 10th, Miss M. CHADBURN in the chair, Miss FRANCES IVENS read a paper on the prevention of puerperal morbidity and mortality, with a view to indicating how far the immediate and remote morbidity after childbirth was preventable. Five years ago she had undertaken the supervision of the new maternity home in Liverpool, to which, since its opening in 1920, there had been 1,000 admissions. So far as possible Miss Ivens saw every case before admission, and made an examination, a specimen of any abnormal discharge being sent to the city bacteriologist for report. Cases of active syphilis or gonorrhoea were referred to a special institution, and cases of albuminuria, cardiac disease, or hyperemesis were admitted for ante-natal care. Patients requiring Caesarean section were transferred to the Stanley or Maternity Hospital. At this home, before any internal examination was made, the vulva was shaved and washed with lysol solution; in emergency cases tincture of iodine was also used. During labour all those concerned with the case wore sterilized overalls and boiled gloves. The matron or sister conducted all normal cases with the assistance of the tutor midwives, who were all trained nurses. Any perineal rupture was repaired at the earliest possible moment with silkworm gut. The wound was kept dry and was painted once daily with tincture of iodine. During the puerperium the vulva was swabbed over a douche-pan four-hourly during the day with lysol solution, and a large sterile pad was applied. The patient was encouraged to lie on her side for part of each day and to sleep in an exaggerated Sims's position which was not uncomfortable: anteversion of the uterus was thus encouraged. In cases of ruptured perineum micturition was performed in the hands and knees position so that the wound should not be soiled; catheterization was avoided. Of the 1,000 patients admitted, 206 were pre-maternity cases and 679 were maternity cases, of which 390 were primiparae and 289 multiparae; 115 were post-natal cases. Miss Ivens said that there had been no maternal mortality among these cases and no maternal morbidity as defined by the Central Midwives Board rules among the cases delivered in the home. Miss Ivens classified the cases as follows: Contracted pelvis occurred in 130 cases, the high percentage being probably due to the fact that a proportion of the cases were referred from outside clinics, doctors, and midwives for special observation and care. Of the total number of maternity cases (679) natural delivery took place in 601, or 88 per cent. Among the complications encountered were post-partum haemorrhage (3 severe and 2 slight), adherent placenta, perineal tears, fibromyomata, twin births (8 pairs), unreduced occipito-posterior position, placenta praevia (8), prolapse of cord, pelvic presentations (25), face presentations (2), eclampsia (1), an emergency. Induction of premature labour was employed in 48 cases, delivery by forceps was effected in 30 cases, and 29 patients required Caesarean section. Of the infants 39 were stillborn or died in the first ten days, 22 being premature. Miss Ivens described 11 cases where there had been some morbidity not amounting to the standard recognized in the Central Midwives Board rules. Full details of this investigation would shortly be published. She recognized that it was unwise to draw definite conclusions from so small a number of cases, but she was inclined to believe that the results pointed to the following conclusions. Latent or pre-existing infection was responsible for a considerable percentage of cases of puerperal sepsis; the organism might not infrequently be isolated from the urine during pregnancy, and intermittent albuminuria during pregnancy was an indication for bacteriological examination of the urine. Cases should be removed from unsuitable surroundings, and the accommodation in homes should be sufficiently ample for patients to be admitted a day or two before labour was anticipated. A rigidly aseptic technique was important. Well trained midwives could deliver a very high percentage of maternity cases if ante-natal care had been given by a doctor, and if skilled medical help and, if necessary, institutional treatment could be obtained when required. In view of the need for study of the origin and character of the infecting organism in cases of fulminating puerperal fever, such cases should be placed at the earliest possible moment under the care of an obstetrical specialist and a bacteriologist.

Dr. VIOLET RUSSELL described the technique adopted in private cases, and emphasized the need for efficient sterilization of the surgeon's hands and of the patient's body. Gloves should always be used, and she did not consider that swabbing was much good. The vulva, vagina, and cervix should be freely painted with tincture of iodine.

Dr. E. PHELPS mentioned the contrast between home conditions found in the practice of specialists and those which obtained in the East End of London.

Lady BARRETT was specially interested in the cases described by Miss Ivens where there was a pre-existing focus of infection. She was abandoning the theory that wound infection was the most important cause of puerperal sepsis. The factors to be considered were: (1) the focus in the mother; (2) low resistance in the mother; and (3) infection by the attendant. A mask might be a more important preventive than a gown. She was not certain that the banished theory of air infection would not have to be recalled in view of some recent experiences of her own.

AT a meeting of the Edinburgh Obstetrical Society held on February 11th, the President, Professor B. P. WATSON, in the chair, Mr. D. M. GREIG, conservator of the museum of the Royal College of Surgeons, Edinburgh, read a paper entitled "Is plagiocephaly ever a birth deformity?" Mr. Greig described typical plagiocephaly and its measurement, briefly indicating the usual causes to which it had been ascribed. While doubting whether decubitus could bring about plagiocephaly, he admitted that injury during birth was by no means always a precursor of the deformity. The formation of plagiocephaly had been ascribed to pressure during birth, especially in a flat or a Nägele pelvis; but he thought that the combination which contributed most commonly to it was a normal child, a young primigravida with a powerful contracting uterus, and a "justo minor" pelvis. He gave details of a case illustrating his remarks, with photographs of the infant, and he instanced several cases, reported by various writers, in which plagiocephaly had been associated with this combination. Mr. Greig then pointed out that if a normal head passing through a "justo minor" pelvis could bring about plagiocephaly, the same deformity ought to follow when an unduly large head had to pass through a normal pelvis. He gave particulars of three cases in support of this suggestion, illustrated by drawings, photographs, casts, and the actual skulls. In conclusion, he demonstrated other skulls in which, together with plagiocephaly, there was evidence of undue pressure during birth. He emphasized the difficulty in obtaining full and accurate details of the birth of any individual after the lapse of even a few months, and suggested that the solution of the question as to this cause of plagiocephaly lay with the accoucheur.

Reviews.

WALKER'S "DERMATOLOGY."

EIGHT editions in twenty-five years, the number attained by Sir NORMAN WALKER's well known textbook, must almost constitute a record among publications dealing with skin diseases, and at any rate ensures for it a prominent place among the "best sellers" of dermatology, a place that it thoroughly deserves. Modestly enough the author still persists in calling it an *Introduction to Dermatology*,[1] and states that it does not profess to deal with the rarer pathological conditions of the skin, such as are more fully discussed in larger works; but as a matter of fact there are few points of any importance which are omitted, although the plan of the book very properly demands the more generous allocation of space for the commoner diseases. Every writer who permits himself to produce a textbook betrays a special weakness for certain portions of his subject, and these usually form the most interesting part of the book. In this instance we would direct the reader's attention particularly to the subjects of dermatitis venenata and dermatitis autophytica, which have always been favourite objects of study to Sir Norman Walker, and which lend themselves appropriately to treatment in his characteristic racy style. It is long since the entity "eczema" has been admitted to exist by the Edinburgh school, and here the term is mentioned only that it may be severely condemned and its use proscribed; whether anything is gained by substituting for it the word "dermatitis" is doubtful, and we are interested to note that even in these pages the author resorts to the term "eczema," permitting himself the luxury of employing it if only the printer will place it between inverted commas. In using any word the most important thing is that the writer and the reader should both understand clearly what it means, and if it is clearly understood that eczema is merely an inflammatory condition of the skin of unknown etiology but associated with certain features, what is the harm in employing this time-honoured term? If we may permit ourselves to criticize one omission it would be that there is no description of the primary lesion in syphilis; surely this comes within the scope of such a book. It is true that it is most often seen by the venereal specialist, who too seldom is a dermatologist; but surely the general practitioner has a right to be introduced to one of the most important manifestations of disease upon the skin in an introduction to dermatology. Similarly we think that there should be mention of rashes of the acute specific fevers, some of which are always cropping up, and have to be distinguished from other skin eruptions. These, however, are minor defects, if they be defects, in a deservedly popular manual, which has grown stouter with age but which still remains of convenient size. This is due to the care with which the inclusion of all modern advances in the subject has been balanced by a ruthless pruning of superfluous matter, or matter which has become obsolete. The result is a thoroughly up-to-date volume. A special word of commendation must be given to the excellent and numerous coloured plates. They had been growing in number in the earlier editions, and further additions have now been made. They are mostly taken from excellent wax models, and are far more lifelike than is usual even in more elaborate and expensive works. We have no doubt that the present edition will worthily uphold the tradition set by its predecessors and will soon be exhausted.

DEVELOPMENTAL ANATOMY.

PROFESSOR AREY has published, as the title of *Developmental Anatomy*[2] suggests, a textbook which includes more post-natal development than most other manuals of embryology. The outline presented of the more important developmental changes manifested after birth is a very valuable addition; it is indeed to be hoped that in subsequent editions this feature may be still further amplified, as it is of greater significance to the student of medicine than much of the detail which frequently obscures fundamental knowledge and principles.

The book is divided into three sections. The first deals adequately with the early stages of development, and although the accounts refer primarily to human and mammalian embryology, the requisite amount of comparative embryology is introduced. The second section traces the origin and differentiation of the organs and systems, the derivatives of the three germ layers being considered consecutively. The description of the various developmental processes are concise and very clear, and can readily be followed and appreciated by the junior student. At the end of each chapter is a list of the commoner anomalies, and in every instance a brief reference is made to the mode of occurrence. The third section consists of a laboratory guide for the microscopic study and dissection of chick and pig embryos. In this part the author acknowledges very free use of the text and illustrations of the well known manual by Prentiss. The inclusion of this section enhances the value of the book considerably and renders it a particularly attractive and suitable textbook of embryology for medical or science students, presenting as it does within the one cover both the systematic and practical aspects of the subject. References are given throughout to the more important papers on subjects of special interest or where considerable difference of opinion exists. The book is excellently illustrated by over four hundred figures, all of which are clear and serve their purpose admirably.

Professor Arey is to be congratulated on the production of a textbook of embryology which may be highly recommended and is likely to be used very widely.

SYNTHESIS OF DRUGS.

Organic Medicaments and their Preparation[3] is an English translation of a textbook written a few years ago by Dr. E. FOURNEAU, the head of the laboratory for therapeutical chemistry at the Pasteur Institute. He was invited to go to Madrid in 1917 to arrange and direct a course of theoretical and practical instruction in the synthesis of important drugs, and the volume under review was based on the course he arranged. The book is therefore of an introductory and illustrative character, for the author has selected certain typical processes which appeared to him to be of outstanding importance, and has given a full and detailed account of the problems they raise. This method has made it possible to produce an easily readable introduction to a very technical subject.

Dr. Fourneau deals with all the problems concerned in the synthesis of drugs, for not only does he describe the chemical processes employed, but he explains also why one process is used in preference to another, and even describes the way in which the price of raw materials and the percentage yield of final product influence the cost of the synthesized drug.

The general purpose of the book is well stated by Dr. Roux in his preface, where he says of the book:

> "Above all it is a programme. Research in chemotherapy is of little renown in our country. Most new medicaments that we use are of foreign origin. This comes about partly because we have few chemists who have specialized in drug synthesis, and further, because no instruction in the subject is given in either technical schools or universities. M. Fourneau is a recognized missionary convinced of the need for making France no longer dependent on the foreigner for important pharmaceutical products."

Most of these words apply with equal if not greater force to our own country, and therefore we have special pleasure in welcoming an English translation of this work. It is divided into two sections. The first and larger gives a general description of the mode of preparation of a large number of drugs. The most important classes dealt with are antipyretics, hypnotics, antiseptics, local anaesthetics, and organic compounds of arsenic and mercury. A certain number of general problems are dealt with, and the author makes some very interesting remarks on the difficult

[1] *An Introduction to Dermatology.* By Sir Norman Walker. Eighth edition. Edinburgh: W. Green and Son, Ltd. 1925. (Demy 8vo, pp. xviii + 373; 92 plates, 80 figures. 20s. net.)

[2] *Developmental Anatomy.* A Textbook and Laboratory Manual of Embryology. By Leslie Brainerd Arey. Philadelphia and London: W. B. Saunders Co. 1924. (Sup. roy. 8vo, pp. 433; 419 figures. 27s. 6d. net.)

[3] *Organic Medicaments and their Preparation.* By Dr. Ernest Fourneau. Authorized translation by W. A. Silvester, M.Sc.Sheffield. London: J. and A. Churchill. 1925. (Med. 8vo, pp. x + 262; 22 figures. 15s. net.)

problem of the relation between chemical constitution and pharmacological action. He realizes the enormous complexity of this particular problem, and carefully avoids sweeping generalizations; consequently his ideas are of great interest and value. In the second half of the book detailed descriptions are given of the methods of preparing a large number of drugs on the laboratory scale.

The book is one that will be of great interest to all concerned in the synthesis of drugs; its special value depends, of course, on the fact that the author is a master of his subject, and hence everything that he says is of importance. The translation is excellent and the book is well got up and well illustrated.

MACCALLUM'S "PATHOLOGY."

THE fact that Professor W. G. MACCALLUM'S *Text-Book of Pathology* has had such a successful career is ample justification for the novel method of presentation of his subject which the author first adopted. The third edition[4] has just appeared, but in the eight years since the book was published it has been revised and reprinted seven times. The general structure of this textbook differs from other systematic textbooks on pathology chiefly in the fact that it departs from the customary method of treating general and special pathology separately, and in the way in which it is planned to discuss disease as far as possible on the basis of etiology. Its beautiful pictures and the discursive style of the text have always made it an easy book for students and a pleasant field in which the teacher could browse. No doubt this book has often been taken down from the laboratory shelf to verify some small point, not to be replaced immediately the information sought has been obtained; it is apt to beguile the reader, enticing him to some stimulating thought. It teaches ideas rather than facts. The present edition improves on its predecessors chiefly in the chapters on rickets and diabetes, including in these subjects the new knowledge gained in the last four years; certain of the infectious diseases also, such as encephalitis lethargica and typhus fever, have been handled in a different way. A little has been added and a little taken away, but this trimming has not changed the distinctive character of the whole. Printed on thinner paper, it is slightly less bulky, but unfortunately still costs £2 5s.

OBSTETRICS.

THE fourth edition of Professor DE LEE'S *Principles and Practice of Obstetrics*[5] has, according to the preface, been submitted to a thorough and painstaking revision, both in regard to text and illustrations. Some additions and alterations have been made, and unfortunately it has been found impossible to reduce the size of the volume, which remains encyclopaedic in its proportions, and therefore a book for reference rather than for the student. As is well known, Professor De Lee is the editor of the obstetrical volume in the Practical Medicine Series of "year books," and the secretarial organization used in that connexion must have made him familiar with all the obstetrical literature of the world in the last decade. Indeed, traces of this are to be found in this volume; there is so much in it that in many places the matter is not very coherently arranged; views and observations are mentioned which are really hardly worthy of consideration, and might have been eliminated during passage through the editorial mill. Readers in this country must bear in mind the fact that the book is intended, in the first place at any rate, for practitioners in the United States, where conditions in many respects are very different. For example, in this country there is not the same likelihood of practitioners undertaking such operations as Caesarean section in circumstances unsuitable and for indications of questionable validity.

There is a "tide of obstetric operating now prevalent with its resultant maternal and foetal mortality. While the expert obstetrician in his specialistically manned maternity hospital can obtain more nearly ideal results from his work by extending somewhat the indications for interference, at the present time it is the general practitioner who conducts the largest number of the births, either in the home or in the frequently poorly equipped small hospital. He must be given advice and methods applicable to the milieu in which he works, and non-interference with the processes of Nature, with their careful supervision, *i.e.*, watchful and armed expectancy, has been proved to give the best results. Accordingly the indications for Caesarean section, forceps, version, pituitrin, bag dilators, have been very closely drawn."

The "tide of obstetric operating" does not flow with such perilous force in this country, but "watchful and armed expectancy" ever remains the soundest general principle of obstetric treatment. A series of twelve new illustrations, showing the low cervical Caesarean section, have been inserted, and the editor expresses the hope that this procedure will be adopted for abdominal delivery, since he is convinced "that if it should become established practice when abdominal delivery is indicated, it will directly and indirectly reduce the present frightful mortality from Caesarean section." While we agree that the lower segment operation is a most valuable modification of the classical operation, it ought to be emphasized that it is an operation that can safely be undertaken only by one familiar with general abdominal operative technique, and we cannot entirely share the author's expectations of a greatly reduced mortality by the indiscriminate adoption of this method. As in previous editions, the illustrations are remarkably numerous and on the whole remarkably good. It is quite an education to turn over the pages of this book and look at the pictures. Both the author and the publishers are to be congratulated on a really very fine volume and upon the continued popularity which it evidently maintains.

Professor HENRY JELLETT is to be congratulated on the appearance of a ninth edition of his *Short Practice of Midwifery*.[6] The book is so well known that anything in the nature of a detailed review is quite unnecessary. Many generations of students, both in Dublin and elsewhere, have learned most of their midwifery from earlier editions; that now before us has been revised and brought into line with the latest generally accepted doctrines in midwifery, and particularly such as are taught at the Rotunda Hospital, Dublin. In the appendix is a summary of the carefully compiled statistics of this hospital for the past thirty-three years, covering more than 57,000 consecutive cases of labour—an exceedingly valuable piece of work in itself. The illustrations are clear and useful, and the size of the volume has been kept within limits which make it convenient for the use of the medical student. Altogether there is no sign of decrepitude in this volume, and we are quite sure that it will continue to be as popular as the preceding editions have been.

MALIGNANT DISEASE OF THE KIDNEY.

Cancers du Rein,[7] by LECÈNE and WOLFROMM, forms part of the Bibliothèque du Cancer, published under the direction of Professors Hartmann and Bérard. Under the term "cancer" the authors include malignant growths of all kinds, whether sarcoma or carcinoma. These growths are among the most frequent of those met with in early life, representing from 38 to 50 per cent. of the tumours of infancy. The classification of carcinomas adopted is:

1. Tumours derived from the renal epithelium, subdivided into tubular and papillary carcinomas;
2. Tumours derived from adrenal rests—namely, hypernephromas; and
3. Tumours of the renal pelvis subdivided into papillary and non-papillary carcinomas.

The non-papillary tumours are classified as squamous, alveolar, and adenocarcinomas.

While devoting a separate section to hypernephroma, the authors state that the nature of this growth is still obscure and it is impossible to affirm that it is really due to aberrant inclusions of adrenal tissue. The frequency of its occurrence has been overestimated in recent years, and it is often impossible to say whether a renal tumour is a hypernephroma or derived from the renal epithelium.

[4] *A Text-Book of Pathology.* By W. G. MacCallum. Third edition, thoroughly revised. Philadelphia and London: W. B. Saunders Company. 1924. (Sup. roy. 8vo, pp. xv + 1162; 575 figures. 45s. net.)

[5] *The Principles and Practice of Obstetrics.* By Joseph B. De Lee, A.M., M.D. Fourth edition, thoroughly revised. Philadelphia and London: W. B. Saunders Company. 1924. (Sup. roy. 8vo, pp. xv + 1123; 1,128 illustrations on 923 figures, 201 of them in colour. 55s. net.)

[6] *A Short Practice of Midwifery.* By Henry Jellett, B.A., M.D.Dublin Univ., F.R.C.P.I. Ninth edition. London: J. and A. Churchill. 1924. (Post 8vo, pp. xvi + 591; 258 figures. 18s. net.)

[7] *Cancers du Rein, de la Glande Surrénale et des Voies Urinaires Supérieures.* Par P. Lecène et G. Wolfromm. Paris: Gaston Doin. 1923. (Roy. 8vo, pp. 207; 32 figures. Fr. 15; franco, fr. 16.50.)

The presence of doubly refracting lipoid is not characteristic of hypernephroma, since it occurs in chronic nephritis and in epithelial tumours of other organs. The presence of lecithin is probably of more importance as indicating a relation to the adrenal gland. Speaking of the lymphatics of the kidney, the authors state that they pass in a kind of mesonephron into the lateral aortic glands, the posterior lymphatics going to the upper, the anterior lymphatics to the lower set. They are numerous and lie in very vascular tissue, and although it has been recommended that they should always be removed the operation is difficult and dangerous. Haematuria may precede the other symptoms by several years—eleven and a half years in one case—showing that the evolution of a renal carcinoma may be long. The duration of life after the tumour has been recognized may also be relatively long; Gillet mentions six cases of survival for from ten to sixteen years. Carcinoma of the kidney recurs after nephrectomy in the proportion of 80 per cent.; in 100 cases 22 died from the operation, and of the 78 survivors there was rapid recurrence in 61, while in 16 only was there prolonged survival. With regard to carcinoma of the pelvis, Derevenko in 54 cases, of which 30 were operated on, witnessed rapid recurrence in the majority. Necker observed a recurrence in the form of vesical papilloma six months after nephrectomy, and Asch a similar recurrence ten weeks after the operation.

NOTES ON BOOKS.

IT is not surprising that Professor FINDLAY'S volume *Chemistry in the Service of Man* should have reached a third edition.[8] The basis of the little work is a course of lectures delivered in 1915 to an educated audience without any knowledge of the science of chemistry, and as published it is intended for readers of that class. The present edition is brought up to date by the introduction of three new chapters on (1) radio-activity and atomic structure, (2) the rare gases of the atmosphere, and (3) metals and their alloys. From beginning to end it is clearly and attractively written, needless technicalities are avoided, yet it is pervaded by the spirit and character of really scientific instruction, so that it is not to be galloped through with novel-reading speed. A brief historical introduction, beginning with the philosophy of Empedocles and Aristotle, is a notable feature. In these times doctors have a hard task to maintain even a reasonable acquaintance with the advances in strictly professional knowledge; yet if a man does want to bring up to date his acquaintance with the chemistry he was taught at college he could not do better than spend an occasional hour over the Aberdeen professor's new edition.

We ought to have announced long ago that Professor PICKERILL'S book on *The Prevention of Dental Caries and Oral Sepsis* had reached a third edition.[9] A large part of it is devoted to an elaboration of his now well known thesis that the safeguard against all dental ills is a plentiful flow of alkaline saliva. The criticism that was made on the appearance of his first edition that adhesive food covered by mucus defies all the powers of abundant and alkaline saliva appears to us still to remain unanswered. Indeed, Professor Pickerill is disinclined to recognize this particular property of foodstuffs, and though he has invented a new and terrible word, "lodgeability," and has divided foodstuffs accordingly, he seems to attach more importance to the circumstance that the "lodgeable" articles "are originally either alkaline or neutral in reaction," while the "unlodgeable" are "originally acid in reaction," than to adhesiveness or the reverse. Briefly the theory is that slightly acid and sapid foods produce an abundant and prolonged secretion of highly alkaline saliva which will neutralize the acid formed from carbohydrate debris and so will prevent dental caries, while alkaline and tasteless foods produce only a limited flow of less alkaline saliva useless as a preventive. To it has been objected that the flow of saliva is not continuous and that mucus, which soon coats all food debris, and perhaps the debris itself, is impermeable to saliva. This latter point touches the vexed question of the hardening of enamel after eruption of the tooth, and in this connexion the author states that mucus is a non-electrolyte and that hence viscous saliva would hinder the dialysis necessary to the hardening. In addition to saliva the author has explored practically every avenue by which the discussion of dental caries can be approached, and his experiments, observations, and conclusions are clearly and concisely stated. No point is too trivial for notice and no problem too impenetrable for attack. Occasionally his observation seems to be at fault, as in his failure to find constriction of the jaw before the age of 6, and occasionally we may question his data, as with regard to the storage of berries by the Eskimos or the extent of dental caries among the Guachos; but the reader's interest is kept keenly alive and our critical faculties are thoroughly roused from cover to cover.

Dr. CECIL WEBB-JOHNSON has written a book entitled *Woman's Health and Happiness*,[10] the object of which is to help the average woman to a better and clearer knowledge of herself, and thus to prevent ignorance and false ideas from wrecking lives which should be serene and bright. The author takes his readers through the various biological epochs with their surrounding duties and dangers, and among the topics considered are some aspects of marriage; sexual love; the expectant and nursing mother; food and good health; exercise, dancing and other recreations; nerves; women and employment; obesity; the approach of age; and danger signals. The book contains much common-sense advice, is wholesome in tone, and may be recommended as a useful guide to those for whom it is intended.

The fifth edition of Waller's *German-English Medical Dictionary*[11] has been improved and enlarged by M. WHITE, though the actual size of the volume has been decreased. A considerable number of new words have been added, particularly with reference to anatomy and chemistry, but there is still some uncertainty about pathological terms, as in the previous edition. In some cases short definitions are given and descriptions of the composition of certain remedies. The third edition of the *English-German Medical Dictionary*[12] of WALLER and KAATZ includes a large number of technical terms, together with many simple words which can be found in the ordinary dictionary. It will probably prove of more use to German readers of English books than to English students of German.

The forty-fourth volume of the *Transactions of the Ophthalmological Society of the United Kingdom*[13] is well up to the standard of previous issues, both in the interest of its contents and in the excellence of its illustrations. A considerable part of the book is devoted to the Oxford Ophthalmological Congress of 1924, and the annual reports are published of the Midland, the North of England, and the Irish Ophthalmological Societies. Included in the list of communications made to the Ophthalmological Society of the United Kingdom during the year under review is a report of the discussion of the physiology and pathology of the pupil reaction.

The *Medical Register*[14] for 1925 contains 49,958 names, as compared with 48,140 for last year. During the year 2,796 names were added, and of these 1,190 were registered in England, 935 in Scotland, and 441 in Ireland; 226 were colonial, and 4 foreign. There is again a considerable increase in the numbers registered in Great Britain and Ireland, and both the total of registrations and the numbers registered in each of the three countries are the highest yet recorded. The number of names removed from the *Register* was 978, being 55 more than in the previous year. Of these 849 were removed on evidence of death; 124 because of failure to reply to the inquiries of the Registrar as to cessation of practice or change of address; and 5 were struck off the *Register* under the disciplinary powers conferred on the General Medical Council by the Medical Act of 1858. The large number of new registrations during the year has caused an increase of some forty pages in the size of the volume. The *Dentists Register*[14] for 1925 has been issued simultaneously. It contains 13,818 names, representing an increase of 345 over the corresponding figure in the previous volume. During the year 524 dentists were registered with qualifications and 210 without; 524 names were restored and 916 were removed from it for various causes, including 147 on evidence of death. The *Register* this year contains for the first time a local list of names, the London names being grouped under the postal

[8] *Chemistry in the Service of Man.* By Alexander Findlay, M.A., D.Sc., F.I.C. Third edition, revised and enlarged. London and New York: Longmans, Green, and Co. 1925. (Cr. 8vo, pp. xix + 300; 26 figures, 4 plates. 6s. net.)

[9] *The Prevention of Dental Caries and Oral Sepsis.* By H. P. Pickerill, C.B.E., M.D. Third edition. London: Baillière, Tindall and Cox. 1923. (Demy 8vo, pp. xii + 340; 80 figures. 18s. net.)

[10] *Woman's Health and Happiness.* By Cecil Webb-Johnson, M.B., B.Ch. London: Methuen and Co., Ltd. 1925. (Cr. 8vo, pp. xii + 242. 6s. net.)

[11] *German-English Medical Dictionary.* By Joseph R. Waller, M.D. Fifth edition, improved and enlarged by M. White, M.D. Leipzig and Vienna: F. Deuticke. 1925. (Med. 16mo, pp. 388.)

[12] *English-German Medical Dictionary.* By Joseph R. Waller, M.D., and Moritz Kaatz, M.D. Third edition. Leipzig and Vienna: F. Deuticke. 1925. (Med. 16mo, pp. 193.)

[13] *Transactions of the Ophthalmological Society of the United Kingdom.* Vol. xliv. Session 1924. London: J. and A. Churchill. 1924. (Demy 8vo, pp. li + 452; 43 figures, 18 plates. 30s. net.)

[14] London: Constable and Co., Ltd. *Medical Register*, £1 1s.; *Dentists Register*, 12s.; *Students Register*, 7s. 6d.

districts and subdistricts, the remainder under the cities, towns, or villages in each country. The Navy now has 43 dentists, the Army 75, the Royal Air Force 27, and the Indian Medical Service 1. The General Medical Council has also issued a volume containing the lists of medical and dental students registered during 1924.[14] The medical students' registrations were 1,043, as compared with 545 in 1923 and 1,833 in 1922; Scotland again heads the list. Registrations of dental students numbered 200, as compared with 107 in 1923 and 424 in 1922.

The *Alliance Year Book and Temperance Reformers' Handbook for 1925*[15] gives a review of the situation in the different countries of Europe. The position of temperance legislation in the British Commonwealth during 1924 is explained, and, under the heading of "Some medical aspects of total abstinence," the publication of the Medical Research Council, entitled *Alcohol: Its Action on the Human Organism*, is considered, and also Professor Starling's *The Action of Alcohol on Man*. Several statistical tables are supplied.

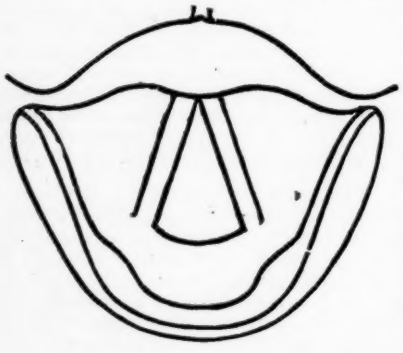
[15] *The Alliance Year Book and Temperance Reformers' Handbook for 1925.* Edited by George B. Wilson, B.A.Lond. London: United Kingdom Alliance and Headley Brothers. 1925. (Demy 8vo, pp. 269. 2s.)

MEDICAL AND SURGICAL APPLIANCES.

OUTLINE DIAGRAM OF THE LARYNX.

Rubber Stamp.

SIR STCLAIR THOMSON writes: The conventional diagram of the larynx has descended to us from the early days when the chief interest of a laryngeal case was "to see the cords" and anything growing thereon. This diagram was particularly unsatisfactory for displaying the interarytenoid region which, with the neighbouring area above each vocal process, is the most frequent site for the deposit of tubercle. Dr. H. Smurthwaite has most kindly come to my assistance with his artistic skill in making a design to my suggestion. The outline drawing here figured is, of course, semidiagrammatic, for it is impossible in the larynx to view both the interarytenoid region and the laryngeal surface of the epiglottis at one and the same time. Still, this conventional outline will enable laryngologists to indicate changes in any part of the larynx, including the posterior wall, both sides of the aryepiglottic folds, the sinus pyriformis, and the post-cricoid region—all of which are inadequately represented in the usual diagram of the larynx. This rubber stamp has been put on the market by Messrs. Mayer and Phelps, 58, New Cavendish Street, London, W.1.



ROYAL COMMISSION ON LUNACY AND MENTAL DISORDER.

(*Continued from page 381.*)

EVIDENCE OF NATIONAL ASYLUM WORKERS' UNION.

AT the sitting of the Royal Commission on Lunacy Law and Administration on February 24th, with Mr. N. MICKLEM, K.C., deputy chairman, presiding, evidence was taken from the National Asylum Workers' Union, which, it was stated, comprised 11,000 members working in 128 institutions in Great Britain. The evidence was tendered by Mr. Walter Blood and Mr. George Gibson, respectively president and honorary secretary, and by Miss Maud Wiese, chief charge nurse at Claybury.

In its evidence the Union advocated that the mental health authorities should have powers conferred upon them to inquire into the incidence of insanity in their respective areas, to provide out-patient clinics at mental hospitals, and to organize similar clinics in conjunction with general hospitals, and they should be able to commit patients for treatment for a limited period without certification. The Union held that the conducting of mental hospitals as profit-making institutions should be abolished. Another reform which was urged was that medical superintendents should confine themselves to medical affairs, whilst still remaining the guiding disciplinary authority in the institution, but with powers of suspension only. Medical superintendents were professional men, and it seemed absurd that their energy should be wasted in office routine as at present. The minimum proportion of medical officers to nurses should be defined by law, and in the case of nurses at least 50 per cent. of the whole staff should be qualified mental nurses. It was stated to be no uncommon occurrence under existing conditions for a nurse to be left alone during the daytime with thirty or even fifty patients, and an instance was known to the witnesses in which a nurse had control in the airing court of over a hundred patients. This constant understaffing was detrimental to the patients and unfair to the staff. A proportion of one to ten on actual duty should be insisted on. The introduction of female nurses into male wards was deplored. Over 10 per cent. of the male cases of insanity were of syphilitic origin, and many more of the patients were sexually abnormal, and their conduct could not be predicted. With regard to private mental hospitals, the experience of the witnesses was that these were constantly changing their staffs, and that little effort was made to engage or retain qualified mental nurses. A further objection was that the greatest safeguard of the personal liberty of the patients—namely, regular visitation by a publicly elected committee—was absent.

The witnesses believed many criticisms of the lunacy system to be well founded, but strongly denied that cruelty to patients was at all common. It had to be remembered that the mental nurse was compelled to put up with abuse and assault by patients daily, and occasionally the provocation to retaliate overcame the will. The chief trouble was the constant changing of staff in mental hospitals, and in nine cases out of ten it was the inexperienced nurse who was at fault when any breach of discipline occurred. The vast gulf between mental and general nursing was pointed out. The general nurse performed her duties among sane people, who retained the instincts of decency and good conduct, and were inmates of the hospital of their own volition, and were generally grateful for what was done for them; the mental nurse had to carry out her duties amid circumstances generally the opposite to these in every respect. Only by the general adoption of the three-shift system—already widely adopted in the Midlands—could justice be done to patients in mental hospitals. Among reforms suggested by the Union on behalf of patients were the following: that certification should not be resorted to until after at least three months' treatment; that the principle of single care should be extended; that the dietary in institutions should be improved and a light supper instituted; that more outdoor recreation should be provided; that there should be a system of credit vouchers to patients who did useful work; and that nurses' key chains should be abolished. The Association also urged that, to protect the staff, special disorders common to mental hospitals should be scheduled as "industrial diseases" under the Workmen's Compensation Act; these were colitis (asylum dysentery), typhoid, and phthisis.

Asked whether there was an excessive use of sedatives or purgatives in mental institutions, Mr. Blood replied strongly in the negative. Croton oil he had never known to be used in his experience of asylums. As to sedatives, the only drug given was a sleeping draught, and that but seldom. Miss Wiese said that in her experience these things were not given unless they were absolutely necessary, and even when the patient had been put upon any of them it was within the nurse's discretion to withhold. Mr. Gibson said that twenty years ago it was the custom to have a stock-pot aperient, but to-day nothing of the kind was given unless it was definitely prescribed, and it was the practice to return into store such medicines as were not administered.

THE EVIDENCE OF DR. LOMAX.

At the sitting of the Lunacy Commission on February 25th the evidence of Dr. Montagu Lomax, author of *The Experiences of an Asylum Doctor* (1921), was taken.

The Chairman (Mr. H. P. MACMILLAN, K.C.) said that the Commission had had the advantage of reading Dr. Lomax's most interesting book, also the Cobb Report and Dr. Lomax's reply thereto. He wished to pay a tribute to the very great care Dr. Lomax had taken in considering this whole topic and the zeal he had shown in elucidating it. As the Commission had already received evidence from the National Society for Lunacy Reform, he thought it would be well if Dr. Lomax confined himself to those points on which, he understood, the witness was not in entire agreement with the proposals of the society.

The Position of the Medical Superintendent.

Dr. Lomax said that he had been for many years in general practice, and was now doing mental work. His interest in this topic of lunacy reform originated in the service in which he was engaged in two asylums—Lincoln and Prestwich—during the war. In consequence of his experiences in those two asylums he came to the conclusion that the present system stood in need of reform. He dealt first with the position of the medical superintendent. He urged an entire separation of the offices of medical superintendent and executive chief of the institution. This was specially necessary in large asylums, containing more than 1,000 patients. The Chairman suggested that if this large type of asylum, of which there were a good many examples in this country, gave place to the more modern form of villa asylums, with a limited number of inmates in each institution, the objection would disappear. Dr. Lomax maintained that it would still exist; villa asylums, as a rule, were not small, they were on a different system, and the medical superintendent of such institutions would still have to be appealed to on all sorts of questions involving responsibility.

The Chairman: The treatment of mental patients differs from the treatment of ordinary patients in this respect, that curative treatment in the former case must necessarily bring in questions of environment, occupation, recreation, and so forth to a very large extent. The mental doctor, therefore, is interested in many matters in which the ordinary physician has no concern. If you remove the medical superintendent from his control over the whole establishment the result might be to interfere with the very means most desirable in the treatment of the cases.

Dr. Lomax: In everything affecting the welfare of the patient the

medical superintendent must, of course, be supreme, but the appointment of the various outdoor officials and workpeople, such as engineers or farm hands, does not seem to be part of the superintendent's work at all.

The Chairman: But suppose the supervisor in a workshop was tactless, ought not the medical superintendent to be allowed to intervene?

Dr. Lomax: Certainly; that is part of his department, but I am thinking of the medical superintendent's engrossment in clerical and administrative work generally. He has in his hands the ordering of the whole establishment from the executive point of view—for example, alterations and repairs to buildings, engagement and discharge of workmen.

The Chairman: But if I were a medical superintendent I should be very interested in getting my ideas carried out in the building.

Dr. Lomax: There is surely no need for him to see to the papering and painting, the engineering and electrical work, the stores, and so forth. I have known superintendents spend the whole morning in their office dealing with accounts.

The Chairman: But even the choice of wallpaper might have a medical importance.

Dr. Lomax went on to say that an asylum committee thought much more of a medical superintendent who was a good executive officer than of one who was a good medical man. He was regarded as a good superintendent if he economized. He had a free hand in the wards so long as he kept expenses down. The Chairman asked what was his security of tenure, and Dr. Lomax replied that there was none at all; his tenure depended on the whim of the asylum board, and as long as he ran the asylum economically, however unpopular he might be with the patients, he would be as difficult to remove as a clergyman from a country living. He (the witness) was in favour of the medical superintendent being appointed by the Ministry of Health. Earl Russell asked if a superintendent who made reports involving capital expenditure and advocated reforms would lose his job. Dr. Lomax said that he did not think he would lose his job, but he would be warned that those were not the kind of reports he was expected to make. He was of opinion that it would be better for an asylum to be governed by a lay superintendent, and for the present superintendent to be a senior medical director. The Chairman said that in that case a progressive medical man might be hindered in his justifiable work, and the layman might not appreciate medical requirements. He had difficulty in seeing that any province could be withdrawn from the medical man. The true solution might be the delegation of some routine work to efficient subordinates. Dr. Lomax said that seven-eighths of the superintendent's work was at present executive. The superintendent ought to go round the wards with his officers, but in the majority of cases this was never done. In many instances a patient was never seen by the medical superintendent at all.

Before passing from the subject of the medical superintendent, Dr. Lomax referred for corroboration to the report of the conference of medical superintendents held under the chairmanship of Sir Frederick Willis in 1922, and quoted some statements from medical superintendents themselves, including one by Dr. M. A. Archdale, that the medical superintendent was a sort of mixture of prison governor and hotel manager (BRITISH MEDICAL JOURNAL, January 28th, 1922, p. 149).

Alleged Ill Treatment of Patients.

On the subject of ill treatment of patients, Dr. Lomax said, in reply to the Chairman, that he had never actually seen any cases of ill treatment by an attendant—indeed, the doctor was the last person to see such cases—and he feared that in some instances the patient was too cowed to make a complaint, fearing what might happen to him at the hands of the attendant afterwards. Asked by the Chairman whether he did not think that instances of ill treatment occurring while he himself was a doctor in an asylum would be of more value than the repetition of hearsay evidence of alleged cases years after leaving the asylum service, he said that he appreciated the Chairman's point, but while he himself was engaged in the work he had not suspected what he now believed went on.

The Chairman: It is a very serious allegation to make against attendants, first that they are cruel (although you have not seen instances of it yourself), and that then, when they are taken to task by the authorities, they visit it upon the patient.

Dr. Lomax: I am only the spokesman of patients who came to me. I do not speak of anything I have myself observed in the asylum. But I believe there are such cases, hundreds of thousands of them.

The Chairman: Hundreds of thousands!

Dr. Lomax: Yes, all over the world.

The Chairman: My colleagues and I are satisfied that cases of cruelty, possibly of gross cruelty, do occur, but it does not assist us very much to carry the matter into the region of statistics. Such cases must occur inevitably, just as accidents happen on the best administered railways. The problem which interests us is how that kind of thing can be stopped. Your outlook seems a little pessimistic. You tell us that the medical superintendent is a remote person who does not see anything of it at all; the medical officer in charge of the case is undiscerning or is kept in ignorance of what is going on. How are we to get the facts? The patients will not make statements.

Dr. Lomax: Out of the asylum they will. What converted me into a lunacy reformer and a critic of the administration was the volume of this testimony, its character, spontaneity, and consistency, from hundreds of sources.

Lord Russell: You do not tell us what value you yourself attach to these complaints.

Dr. Lomax: I attach the greatest value. It took me two years to convince myself, and then I became an absolutely convinced man.

The Chairman: That is a generality. Take a thousand cases, investigate them with such means as are at your disposal, how many would you find well founded?

Dr. Lomax: I think in every case the patient was telling the truth about the facts that had occurred. His charges were specific. They dealt with names and dates and persons. There was no reason why he should be lying, and, if not lying, the only other possibility is that he may have been deluded. But these are specific assertions made by people who left the asylum perhaps years ago and are living normal lives and are of sound mind.

The Chairman: Do you believe them all?

Dr. Lomax: By no means all, but the great majority.

The Chairman: What is your criterion for distinction between those which are true and those which are not?

Dr. Lomax: To certain trivial things I do not pay much attention, but when it comes to broken limbs and patients practically killed, there is not much question of a dividing line.

Mr. Snell: Do these allegations of cruelty extend to the female side?

Dr. Lomax: Certainly. You hardly find a case, if the patient has been in the asylum for any length of time, in which there are not allegations as to cruelty, either inflicted upon himself or observed by him to be inflicted upon others.

Sir D. Drummond: What steps did you take to corroborate their statements?

Dr. Lomax: I took it that the corroboration would be sought by the present inquiry.

The Chairman: You transfer to us the evaluation of your evidence?

Dr. Lomax: The only way to proceed is to take specific instances and examine judicially.

Lord Russell: Short of admission by one of the parties incriminated, should we get any corroboration?

The Chairman: You have had a number of complaints of ill treatment and have tested them as far as you could. You are entitled to draw from that the inference that the convergence of testimony from different sources demonstrates that in fact a considerable amount of ill treatment does go on at the hands of asylum attendants. Many of the cases if explored would turn out to be exaggerated, others might prove to be absolutely trustworthy, but the fact that a large number of complaints have been made converging to one result seems to me to demonstrate that this thing does occur. I do not see, however, that we should be very much advanced if we investigated, say, twenty cases, and found ten proved and ten disproved.

Dr. Lomax: I am asking you to hear not only ex-patients but ex-attendants, some of whom are prepared to come forward and testify.

In further evidence Dr. Lomax referred to a case, particulars of which he had already sent to the Commission, concerning a patient who had died. He held that in the case of all deaths in asylums the medical superintendent should be made responsible for reporting to the coroner any marks of injury or other suspicious circumstances. The Chairman said that the case in question was very fully investigated and reported on to the Board of Control. He had had all the papers before him. Dr. Lomax said that the attendant who had originally reported the case had also made a statement to the Board of Control, and had asked to be called in any inquiry. The Chairman remarked that he did not want to enter into the circumstances, but he understood that the attendant was in the hands of the police at the time. Dr. Lomax denied that this was the case. The complaint was three years old, but the circumstances which had brought the attendant into the hands of the police were quite recent. The Chairman said that he understood that this particular attendant was dismissed from the asylum service for suspected theft. Most of those engaged in law did not pay much attention to allegations made by persons of that character. Dr. Lomax said that he could bring corroborative evidence from outside eye-witnesses independently of this attendant.

A little later the Chairman announced that he and his colleagues were impressed by the suggestion that one or two ex-patients and one or two ex-attendants might usefully be examined, and he invited Dr. Lomax to furnish the Commission with names.

Procedure for Detention.

On the question of the detention of the harmless but at present certifiable person, Dr. Lomax said that he favoured the boarding-out system as operating in Belgium; there patients were detained but uncertified, thereby avoiding stigma. Under the present law people could be far too easily put away in asylums and kept there. He thought there should be first a medical certificate, called a preliminary detention certificate, to be produced in the case of any person with suspected mental disorder on admission to a mental institution; this certificate should give the medical officer in charge of that institution power of detention for a certain period. A second certificate should afterwards be required if the patient had not in the meantime been discharged, and this should be signed, where possible, by a diplomate in psychological medicine, and countersigned by a magistrate. His great point was that every mental patient should have, say, twenty-eight days in a sort of half-way house for observation and preliminary treatment. Voluntary boarders entering the observation building should sign a document conferring the right of detention for twenty-eight days as a safeguard against a sudden attack of insanity of an impulsive character. With regard to private asylums, all those which Dr. Lomax had seen were well conducted. He believed the private asylums of England were as well conducted as any in the world. The objection to them was the existence of the financial motive, but he agreed that the good recovery rate did not support any allegation that a financial motive was operating to detain a patient after he had recovered.

Evidence of Ex-Patients.

The Chairman stated, before Dr. Lomax gave his evidence, that the Commission had had to reconsider its procedure with regard to hearing the evidence of ex-patients tendered by the National Society for Lunacy Reform. The original apprehensions of the Commission that a public inquiry might prove very disquieting to an ex-patient had been justified, and in addition the procedure adopted had had the result of creating an atmosphere of controversy and recrimination which the Commission could not allow to recur. In future therefore, ex-patients would not be exposed to the ordeal of public examination; such witnesses would be examined in private, though it was not intended to exclude the chairman and counsel of the National Society for Lunacy Reform, which was tendering the witnesses. The evidence, with the names omitted, would in due course be published.

Nova et Vetera.

MEDICAL BIOGRAPHY.

IN 1838-40 appeared Thomas Joseph Pettigrew's *Medical Portrait Gallery: Biographical Memoirs of the Most Celebrated Physicians, Surgeons, &c., who have Contributed to the Advancement of Medical Science.* The work was illustrated with five portraits, and contained most eulogistic and redundant accounts of medical men, still living, and in some cases, such as that of Sir James Annesley, nowise deserving the minute attention bestowed upon them.

Old files of medical journals will perhaps throw light on the manner in which Pettigrew's book was received by contemporaries, but we know of no outcry against its appearance such as was raised against the *Medical Circular*, probably from 1852 onwards, for publishing puffs—for they were little else—accompanied by fine wood engravings, of the medical practitioners of the fifties of last century. In 1854 a "strong and very general verdict of condemnation" was pronounced against the practice of publishing "biographies of living members of the medical profession," and at the general meeting of the British Medical Association, held at Leamington in August, 1865, Dr. Stewart (London) carried a motion to the effect "that this meeting sees no reason to dissent" from this pronouncement.

The occasion of this resolution was the publication of certain lives of eminent living medical men by Dr. Herbert Barker of Bedford. These lives were accompanied by photographs, and, at the time of the debate, did not amount to more than three biographies of medical men of the first reputation. At the time of his death, towards the close of the year, only four such lives had been published, and the collected work did not make its appearance until 1867-8, when a quarto volume was issued with the title *Photographs of Eminent Medical Men of all Countries, with brief Analytical Notices of their Works.* The letterpress was by Barker, and the photographs were by Ernest Edwards.

Barker's notices,. though diffuse according to modern ideas, were not objectionable. He avoided, he said, all personal details. The debate, however, condemning his first three lives, and with these his whole subsequent undertaking, was sufficiently condemnatory. In October, 1865, the BRITISH MEDICAL JOURNAL, in an article on contemporary biography and the whole question at issue between Drs. Barker and Stewart, was prompted to ask:

> "What if contemporary biography is to become a recognized and accepted act of professional propriety, what reason is there why we should not all and each of us do that very thing which Dr. Barker now proposes to do for us; viz., issue to the profession and the public a calm and modest and truthful account of what we are, what we have done, and what we are doing, adorn it with our photographic presence, and thus scatter our virtues and facial fames throughout the world?"

Yet some of the most valuable medical biographies are autobiographies. Some dozen stand out in recollection, notably those by Sir Benjamin Brodie, Dickinson Webster Crompton, Nelson Congreve Dobson, Michael Lambton Este (Nelson's naval surgeon), Joseph Fayrer, Frederick James Gant (who put his recollections in the form of a novel), Henry Power, Augustin Pritchard of Bristol, Sir John Simon, Henry Smith, W. D. Spanton, and Jonathan Toogood. So racy are some of these books, so full of long-forgotten detail about apprenticeship and the lives of the old students and the customs of old hospitals prior to 1850, that one is almost tempted to wish that autobiography had been much more widely written than it has been.

The autobiographer, indeed, is the medical historian's best friend. He writes as a rule in old age, and, far from indulging in self-advertisement, is prone to amiable self-depreciation and to revelations of character, for which we should often look in vain in the pages of his official eulogists. Thus Mr. William Clapton, M.B., F.R.C.S., some time vice-president of the Hunterian Society, and well known in Canterbury, where he died in 1912, used to tell of the rhyme with which the street boys of the time of the Great Exhibition of 1851 were wont to taunt the luckless apprentices sent out with baskets of medicines by the general practitioners of the time.

> "O salts and senna, you would not do for me;
> I'd rather go to Jericho than a doctor's boy I'd be."

Clapton was bred in a hard school and practically educated himself from the early period at which he left Christ's Hospital to the time when, by sheer pluck and perseverance, he was able to enter himself as a student at St. Thomas's. He became literary, employing his meal times in running for books to a library. Gibbon, Grote, and Adam Smith were devoured by the young apprentice, whose memory was so retentive that he could in time repeat the whole of *Paradise Regained*, as well as the Prayer Book version of the Psalms.

The late Mr. Henry Power describes remarkable early experiences in his charmingly written autobiography. His bedroom was rather more luxurious than the lair underneath the counter usually assigned to apprentices.

> "It contained an escritoire, a camp bedstead, and a miserable washhandstand. For fear of my setting the house on fire I had a wire gauze candlestick with a dip inside it, always excessively dirty. Beneath the bed were, what I did not much fancy, a number of perfectly black, injected, shrivelled dissections of arms and legs."

This was in 1844. Young John Higginbottom, afterwards F.R.S., in 1816 underwent much indignity and hardship.

> "I had to groom the horse, take it to water night and morning, sweep out the surgery daily, clean all the shop bottles and shelves every third morning, make all the preparations, powder barks and cantharides, and pass them through a fine sieve. I had to make all ointments and plasters, and keep a large stock of pills ready. As there was no fire in the surgery during the coldest weather, my hands were often chapped."

At an earlier date still young Charles Mayo of Winchester was first led to study anatomy by a chance visit to a gallows where, in the open air, hung the skeletons of murderers. Like Tennyson's Rizpah, that tragic mourning mother, he collected the fallen bones, but with a different purpose.

When we come to early practice involving great feats of horsemanship on unmacadamized country roads, the insanitary state of the old hospitals, the primitiveness of urgency surgery performed by candlelight, and a host of similar subjects, it is to the old autobiographers that we turn, or to those autobiographical touches which occur in the midst of the often trite eulogies of the elder biographers.

VICTOR PLARR, M.A.,
Librarian, Royal College of Surgeons of England.

ROYAL MEDICAL BENEVOLENT FUND.

AT the last meeting of the Committee twenty cases were considered and £378 voted to sixteen applicants. The following is a summary of some of the cases relieved.

Widow, aged 47, of L.M.S.S.A.Lond. who died in 1924. She has tried to support herself and children by keeping a boarding-house; this failed, but she is likely to obtain a post as music mistress in a school on the South Coast, when she can have her daughter, aged 4, with her. She asked for £12 to cover three weeks' board and lodging in London, fares for self and child to settle up her affairs in the Midlands before taking the post. Voted £20.

Widow, aged 37, of M.B.Glas. who died in 1922. She has three children aged 10, 8, 6½; her total income is 30s. a week, and she has been only able to earn very little by needlework. She was in hospital during the autumn to undergo an operation, has run into debt, and school fees are owing. Voted £5, and £20 in four instalments.

Widow, aged 87, of M.R.C.S.Eng. who died in 1885. She is bedridden and has to have a nurse at night as the daughter, aged 57, is only able to look after her during the day. Her total income is £100, and the rent is £39 a year. Voted £5, and £26 in four instalments.

Widow, aged 71, of L.R.C.P.Ed. who died in 1918. She has cataract and is only able to do a little knitting, by which she earned £3. She is looked after by her youngest daughter, who is only able to do a little spinning. The applicant's income is £84 a year from property and the daughter's £10. Voted £18 in twelve instalments.

Subscriptions may be sent to the Honorary Treasurer, Sir Charters Symonds, K.B.E., M.S., at 11, Chandos Street, Cavendish Square, London, W.1.

The annual general meeting of the Royal Medical Benevolent Fund will be held at 11, Chandos Street, W.1, on Tuesday, March 17th, at 5.30 p.m., when the annual report and financial statement for the past year will be presented and the officers and committees elected.

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SATURDAY, MARCH 7TH, 1925.

POST-GRADUATE ORGANIZATION IN LONDON.

FOR some time many of those interested in seeing established in London a complete organization for post-graduate medical study have had to view with a growing feeling of disappointment the results of the efforts made during the last five or six years. While they recognize the good work done by the post-graduate schools at Hammersmith and Tottenham, they are of opinion that it does not supply all that, in their view, is urgently required. The two schools mentioned meet the needs of certain kinds of post-graduates, especially those preparing for promotion examinations, and many of the undergraduate schools also have excellent courses for the higher diplomas and degrees. There is no desire to disturb these activities, although in the matter of giving training in certain special clinical subjects much is to be learnt from Vienna.

But more than this is considered to be desirable; in particular and especially it is thought that medical graduates coming from the Dominions and Colonies, and from the United States of America and other foreign countries, should be able to learn by practical experience the character of London as a centre for clinical and scientific medicine, and, if they so wish, to continue some special line of training on which they have already embarked. The visitor who comes with suitable introductions can usually find what he wants, but it has long been thought that there ought to be a definite organization in London to which any medical practitioner qualified in his own country could apply. The Post-Graduate Medical Association was established, with the help of Sir William Osler and Dr. Hurst, to serve this purpose, and the Fellowship of Medicine was started by Sir StClair Thomson and Sir John MacAlister to collect information as to courses and clinics open to medical visitors, and to promote friendly intercourse between members of the profession in this country and their brethren from overseas. Before very long the two bodies combined, and the efforts then made to meet the needs of the situation are deserving of all praise. Yet it has seemed to many in London that they have not been as successful as might be desired, and that in particular not enough is being done to welcome our brethren from the Dominions and Colonies, and that not in the best way. In consequence several informal meetings have been held during the winter for discussion of the situation and how it can be improved. There is, we gather, general agreement that graduate and undergraduate instruction cannot usefully be given at the same place and at the same time, and evidence of this has been afforded by the fact that the undergraduate schools, which in 1919 had agreed to help the Fellowship, eventually withdrew their offer. At the last but one of the informal meetings to which we have referred Sir Thomas Horder, who was in the chair, undertook to write to teachers in London asking for their opinion as to the possibility of arranging special days on which post-graduates might be received at ward visits reserved for them, in this way avoiding any disturbance of the opportunities afforded to undergraduates in their routine curriculum. At the last meeting he reported that to seventeen letters he had received sixteen replies, all of them favourable, and all indicating willingness to help, either in this way or by giving demonstrations at some post-graduate centre. In one or two instances all the senior members of the teaching staff of a hospital expressed their sympathy. It was therefore made clear that individual teachers attached to undergraduate schools were available for post-graduate teaching provided the necessary machinery were established. This would appear to be a very important factor in the success of any scheme. It was suggested also that special laboratory opportunities might be arranged in London and in Cambridge. At an informal conference with representatives of the Fellowship of Medicine and Post-Graduate Association the possibility of establishing a hostel was raised, but there are doubts whether this is within the range of practical politics, having regard to financial considerations. The possibility of interesting the British Medical Association, so far at least as to induce it to provide a theatre for clinical lectures and demonstrations and a bureau for information, was mooted.

Meanwhile, it may be said in conclusion that those interested laid particular stress on the international character which it is desired to give to any organization established. By " international " is to be understood not only foreign countries, but the British Dominions and Colonies; indeed, it is hoped that such an organization as is now contemplated may have an imperial character and reflect the Empire ideal.

We note that an informal discussion on post-graduate study will take place at 6 p.m. on Wednesday, March 18th, at the Royal Society of Medicine. It will be open to all members of the medical profession, as well as members of the Fellowship of Medicine from other parts of Great Britain and from overseas.

THE THYROID GLAND, MANGANESE, AND METABOLISM.

THE arresting results published this week (p. 443) by Dr. Herbert W. Nott bring the value of manganese as a therapeutic agent again into prominence. The efficacy of manganese in the treatment of certain infections—boils, carbuncles, whitlows, lymphangitis, gonorrhoeal infections, tonsillitis, etc.—and certain maladies such as asthma and the toxaemias of pregnancy, was indicated by Mr. J. E. R. McDonagh[1] in 1923. His results excited much interest, and his interpretation of them some controversy; chiefly because of his view that manganese changes the condensation of the protein particles in the plasma into dispersion. Dr. Nott's work in associating the action of manganese with the products of the thyroid gland is of peculiar interest in this connexion, and it will be well to draw attention to certain observations, chiefly from French sources, which appear to have a bearing upon it.

It is now generally agreed that the normal operation of the thyroid apparatus (with which there is an increasing tendency to associate the parathyroid glands) is likely to be deranged in certain acute and chronic infections. The observations of Kottmann and others appear to indicate that thyroid disorder is associated with changes in the state of dispersion of serum

[1] *Proc. Roy. Soc. Med.*, Dermatological Section, 1923, vi, pp. 66-70.

colloids. Mr. McDonagh's explanation of the action of manganese has a new interest in the light of these observations.

More attention appears to have been paid to manganese in France than in this country or in America. Hannon, Pétrequin, Lemoine, and others have satisfied themselves that manganese is a potent catalytic agent possessing the property of acting as an intermediary between the tissues and oxygen. It appears to be one of those agents—of which thyroxin, the reputed active principle of the thyroid gland, is another—concerned in regulating the capacity of the tissue cells to utilize oxygen. It is a powerful factor, as is thyroid secretion, in causing regeneration of the blood corpuscles. It may be for this reason that certain French physicians give to manganese so prominent a place in the treatment of such states as anaemia, chlorosis in girls, haemophilia in boys, convalescence from acute maladies, malnutrition, and other conditions in which functional impairment of the thyroid gland is frequent. It would seem that if manganese be so indispensable to the processes of oxidation within the tissue cells, and if, as Kendall states, the function of thyroxin be to regulate the capacity of the cell to utilize oxygen—its rate of functioning being dependent on the physical state of the cell—then the efficacy of thyroxin may be intimately associated with the cell's content of manganese. Dr. Nott's happy combination of thyroid substance and manganese may thus have a physiological basis of much significance; at all events it affords good ground for further investigation.

The distribution of manganese in the animal organism and in foods is of great interest in this connexion. It is found in precisely those situations in which vitamins are found, and it is lost to the body by the same means which lead to the inadequate ingestion of vitamins, and, it may be added, of iodine. Bertrand and his pupils have advanced good evidence for their statement that manganese "is absolutely indispensable to life and is encountered in all living tissues, both vegetable and animal." It is most abundant in those tissues in which physiological processes are most active, as in the liver, the kidneys, the heart, and the mucous membranes. It is present in fruits and in the growing parts of plants, especially in green leafy vegetables. It occurs in wheat and other cereals, being present, like vitamins and iodine, in the outer layers of the grain, and, like them, being removed in the manufacture of white flour. Thus, while wheat bran contains as much as 3.27 mg. of manganese per 100 grams of material, white flour is lacking in it. How significant these observations are will be obvious to all who have followed modern investigations in regard to vitamins. Clearly, then, further study of manganese in relation to the organism in general, and the thyroid gland in particular, is called for. An attempt of this kind has lately been made by Levine and Sohm in America. These observers have found that the administration of small quantities of manganese to rats increased their rate of growth, improved their coats—making the hair longer and more silky—and caused the animals to be more active. Of even more interest are the observations of Camescasse on debilitated children. He found that, despite rest, good country air, sunlight, and regular and copious nourishment, certain children failed to flourish or to increase in weight. Many measures were adopted to improve their metabolism—iron, arsenic, cod-liver oil, preparations of iodine, and general tonics—but without conspicuous success. When, however, minute doses of manganese were given to these children daily (0.03 to 0.07 gram of manganese bioxide in cachets), within fifteen days striking improvement in weight, in metabolism, and in general appearance resulted in the majority of them (in 9 out of every 10 girls, and in 5 out of every 10 boys). It is of interest to note this difference between girls and boys, since it again suggests some underlying endocrine influence. It is to be noted also that it was unnecessary to do more than recharge the tissues with manganese by a course of fifteen days' treatment; thereafter their weight continued to increase and their general condition to improve.

These observations suggest, as has been said, that Dr. Nott's methods deserve further study both by practising physicians and by laboratory workers.

FOOD PRESERVATIVES.

WE have already mentioned that draft Orders on food preservatives have recently been published by the Ministry of Health, and, in terms in all essential respects identical, by the Secretary for Scotland.[1] They are very much what was expected, for they carry out the recommendations of the Departmental Committee which reported in October last.[2] The Orders would prohibit the use of food preservatives in general, but allow sulphites and benzoates to be used in limited amounts in certain specified articles of food. Certain colouring matters also are prohibited, the most important of which is copper.

In the first place, we welcome the appearance of these Orders as an important advance in public hygiene. The English law regarding food preservatives hitherto has been very lax—indeed, it has been far behind that of most other highly civilized countries—and these regulations introduce necessary reforms long overdue. The almost unrestricted use of food preservatives hitherto allowed in this country has, however, been a convenience to certain trades, and these are naturally objecting to the new proposals.

The appearance of the new Orders was anticipated by a vigorous attack in the columns of the *Times*; this gave rise to a correspondence which included several effective and well reasoned replies. Sir William Pope, who opened the attack, and other critics admitted that some reforms regarding food preservatives were necessary, and confined their attack chiefly to the proposed prohibition of boric acid. The question as to how much damage is done to the consumer by the use of boric acid as a food preservative is a matter of controversy.

It is pretty generally admitted that boric acid may be injurious to infants and invalids, and that some healthy persons are very susceptible to this drug. These facts alone are a sufficient reason for condemning the existing conditions. Hitherto the use of boric acid has been prohibited in milk, and dealers have been required to declare its use in cream, but otherwise no definite restrictions have been placed on its employment, and there has not even been an obligation to declare its presence in food. Sir William Pope and other experts have attacked the proposed prohibition of boric acid on the ground that there is no conclusive evidence that moderate amounts produce harmful effects on normal healthy adults. There is, of course, little likelihood of absolutely conclusive evidence being obtained on this question, since boric acid, like nearly all other substances which have been used as food

[1] BRITISH MEDICAL JOURNAL, February 21st, p. 375.
[2] See BRITISH MEDICAL JOURNAL, November 1st, 1924, pp. 821, 828.

preservatives, does not produce any rapid and obvious harmful effects. Moreover, powerful trade interests are concerned in defending its use, and such interests never lack able expert defenders. As long as trade interests are anxious to maintain the use of boric acid as a preservative there is no likelihood of the evidence against it being universally admitted as satisfactory. Hence we need expect no finality in the dispute as to the pharmacological action of boric acid when used as a food preservative. Our own view is that in such questions the public is entitled to the benefit of the doubt, and that no substance ought to be permitted as a food preservative unless it is certain that it is harmless.

Knowledge regarding the cumulative effects of drugs when these are given daily for years is extremely defective, and we see no reason why the poorer sections of the community should be forced to take unnecessary risks. Other highly urbanized peoples, such as the United States and Germany, manage to feed their populations at a reasonable price without using boric acid, and hence we view with suspicion the statement that prohibition of boric acid will raise the price of food, particularly since this threat has already been both made and disproved in the case of milk. Undoubtedly boric acid can be used as a cheap and convenient substitute for proper care and cleanliness in the preparation of food, but this is not a reason for permitting its use.

We hope the draft regulations will be carried through.

THE "ANNALS OF SURGERY."

WITH its January number the *Annals of Surgery* enters upon its eighty-first volume, and at the same time commemorates the forty consecutive years of editorship by Dr. Lewis Stephen Pilcher. He is still editor, but now works in association with Dr. James Taft Pilcher, and has the collaboration in this country of Mr. Sampson Handley. The Lippincott Company is to be warmly congratulated upon the continued success of the undertaking and upon the distinguished list of contributors to this commemorative number. Dr. W. W. Keen, in a short opening paper on the early days of the *Annals*, "when it was not the *Annals of Surgery*," recalls that its starting point was the formation (1878) of the Anatomical and Surgical Club (later Society) of Brooklyn, from which emanated between 1879 and 1884 nine volumes. The first volume—a very thin one, dated 1879—bore the title *Annals of the Anatomical and Surgical Club of Brooklyn*. Later it became *Annals of Anatomy and Surgery*. The first number published under the name now familiar the world over appeared in January, 1885. Dr. Pilcher was the first president of the original society and a contributor to the volumes. In the winter and spring of 1884 he visited Europe. In Germany he became acquainted with Schede, Bergmann, von Langenbeck, Hahn, Hagedorn, and Volkmann; and in England he met Lister, James Paget, Timothy Holmes, John Marshall, Lawson Tait, Thomas Keith, John Chiene, William Macewen, C. B. Keetley, and Rickman Godlee. One evening in April, 1884, Keetley was dining with Dr. Pilcher, and the after-dinner talk turned upon the theme of possible future surgical journalism. They speculated upon the value and possibilities of an international surgical journal in which the work of the two nations should be united, but to neither did the idea seem more than a dream. Pilcher had already endeavoured to interest the great medical publishers of New York and Philadelphia in the idea of a journal devoted to surgery, but without success. When he arrived home, however, early in May, he found waiting to see him a gentleman who wished to discuss the feasibility of undertaking the publication of a journal devoted to surgery. This was James H. Chambers, who had had considerable experience as a publisher of medical journals, and was confident that such a journal of high class would be a business success. The outcome of the discussion was that an agreement was reached and a contract made under which a monthly journal, to be called the *Annals of Surgery*, was to be edited and published. For forty years since that date the journal has continued to appear without intermission. For seven years C. B. Keetley was Pilcher's London collaborator. Keetley, who was surgeon to the West London Hospital, was possessed of great natural ability, with a leaning to orthopaedic surgery, but was much hampered by deafness. Among prominent supporters were Treves, Jacobson, Macewen, and Watson Cheyne, portraits of whom are given. Dr. W. J. Mayo refers to the forty-five years of the American Surgical Association, founded by the historian of American surgery, Samuel D. Gross, as well as to past contributors to the *Annals*—Senn, Murphy, Billings, Parkes, Roswell Park, and others. The connexion with this country, maintained by the collaboration of Mr. Sampson Handley, is emphasized by the inclusion of his portrait. He enters upon his new undertaking with a brilliant communication on lupus in its surgical aspects—furnished with numerous illustrations and observations. Mr. Handley shows that lupus is an infection involving the lymphatics of the skin papillae, and at the same time a rather wider area of the deep lymphatic plexus. By a corrected view of its pathology he proves that excision so as to include the whole of the superficially infected area, together with a slightly larger area of the deep fascia, followed by primary suture, is the treatment to be adopted whenever practicable. Light treatment tends to fail because it does not influence the deep fascial lymphatics. The doctrine of the paper extends beyond the subject of lupus, and has a bearing upon the treatment of rodent ulcer and carcinomas supervening upon lupus scars. Following Mr. Handley are over thirty articles covering the wide field of surgery, ending with one by Royal Whitman on the abduction treatment of fracture of the neck of the femur. The founding of the *British Journal of Surgery*, which has now published a composite index covering ten years, is alluded to by Macewen in a letter, here reproduced in facsimile. Sir Berkeley Moynihan, in contributing a valuable article on acute pancreatitis, shows that British surgeons continue to be warm well-wishers of the *Annals of Surgery*. The BRITISH MEDICAL JOURNAL joins in the congratulations to Dr. Pilcher, well knowing that his editorial work represents but one side of his activities. His *Ex Libris Antiquis*, a list of books of the old masters of medicine and surgery, etc., published in 1918, represents another side. The very success of the *Annals* encouraged emulation, and Dr. Franklin Martin, editor of *Surgery, Gynecology and Obstetrics*, and Dr. Walter Brickner, editor of the *American Journal of Surgery*, add their congratulations.

THE LIFE AND DEATH OF CELLS.

THE Japanese Government Institute for Infectious Diseases at the Tokyo Imperial University has recently issued a second volume of its Scientific Reports.[1] It deals with the year 1923, and contains eighteen articles on bacteriology and serology, ten on pathology, and five on chemistry. Most of the papers are printed in English, though a few are in German or other languages. They deal with a variety of subjects: even to give a list of the titles of the articles would occupy a large space, and we must content ourselves by stating that the volume will be placed in the Library of the British Medical Association, so that anyone who wishes

[1] *Scientific Reports from the Government Institute for Infectious Diseases at the Tokyo Imperial University.* For the year 1923. Vol. II. Edited by Dr. Y. Miyagawa. Tokyo: Shirokane-Daimachi, Shibaku. 1924. (Double cr. 8vo, pp. 562; illustrated.)

to refer to experimental work carried out at this institute will know where a copy of the scientific reports is available. There are, however, two or three articles to which we will here call attention, because they suggest a promising method of approach in the study of regeneration and repair of tissues. Dr. Y. Miyagawa has made a study of the biological function of the constituents of dead cells, particularly of the effect of the constituents of red blood corpuscles on the regeneration of red blood cells, of the constituents of the epithelial cells of the kidney on the functions of the kidney, and of the constituents of the liver cells in relation to the secretion of bile. He has come to the conclusion that all the cells of organs and tissues of the body are constantly dying, and that part of their constituents are absorbed into the general circulation and act on homologous cells, promoting their functional activity and performing the important duty of maintaining them in good physiological condition. He holds that two varieties of influences play on all the living cells of the body—that exerted by the nervous system, and that due to direct action brought about by constituents of dead cells absorbed into the general circulation. He calls this latter direct action an "auto-regulation." This auto-regulation acts directly on homologous cells, and only on these. But it remains to be decided by further research whether or not the substances derived from the constituents of a dead cell really act directly on the living cells or work through the nerve mechanism. The same investigator, in collaboration with three colleagues, has a second article on the influence of the parenteral inoculation of a pulmonary cell suspension into a living animal. Following the injection of a suspension of the parenchymatous cells of the lung into guinea-pigs and rabbits, a remarkable degeneration, and even necrosis, was observed in the lungs of the injected animals; it was associated with serous exudation and partial collapse of the lung. These changes were not inflammatory, but had the character of a true degeneration. Other organs were affected little if at all. The same paper records a good deal of experimental work on the effect of the injection of pneumotoxin. One other paper on a closely related subject has a general interest. Dr. M. Ono set out to discover how many red blood corpuscles perish each day in a healthy individual. Two methods were used for this calculation—the first from the length of life of red corpuscles, and the second from the daily quantity of biliary secretion. It is estimated that the length of life of a red blood corpuscle is about thirty days, and by calculating from the total quantity of red cells circulating in the blood Dr. Ono has worked out that about 500,000 million corpuscles perish each day, a number which corresponds to the loss of about 100 c.cm. of blood. By the second method of analysis, a quantitative estimation of biliary secretion, the author came to much the same conclusion.

SHAVING-BRUSHES INFECTED WITH ANTHRAX SPORES.

THE untimely death of Professor Ellermann from using a shaving-brush infected with anthrax spores has led to the publication by the Institute for General Pathology of the University of Copenhagen of an account of the case, and the examination of the brush, by Oluf Thomsen and Vilh. Jensen. Professor Ellermann's illness began on December 17th, 1924, as a small spot on the left cheek. This was followed by much oedema, but without at first any noticeable affection of the general state of health. The brush sent for examination proved to be of a large size model (about 13 cm. long, with handle). It was made to imitate badger, but actually consisted of dyed Chinese horsehair. Bacteriological examination showed that the hairs of the brush were infected with anthrax spores. In spite of the injection of anthrax serum Professor Ellermann died on December 24th. It will be remembered that the first case of anthrax traced to a shaving-brush occurred in England in 1915. In that year six cases were reported; in 1916 thirteen cases; in 1917 and 1918 none were reported, but there were fourteen in 1919, thirteen in 1920, and four in 1921. No cases have since been observed in England. Consequently, the number of cases observed in the civilian population in England amounts to fifty, with eighteen deaths. Among the troops in Great Britain from December, 1914, to February, 1917, eighteen cases of anthrax were ascertained; of these, four were certainly due to infected shaving-brushes. Among the British troops in France from January, 1915, to February, 1917, there were twenty-eight cases of anthrax, and of these the infected spot was on the cheek, chin, or neck; in no case was it possible to demonstrate that the infection originated from shaving-brushes, but this does not prove that it did not, for shaving-brushes were issued as part of the equipment. In the British Navy, from December, 1919, to January, 1921, there were six cases, and in two of these the infection might certainly be regarded as due to shaving-brushes. A complete account of the cases of infection occurring in England and other countries is given in the article, and it is stated that a considerable number of shaving-brushes made of horsehair from China, but falsely labelled, appeared on the market in 1915. The measures taken by the Ministry of Health are related, and the passage (July, 1919) of the Anthrax Prevention Act, which gave the Government power, by an Order in Council, to forbid the importation of suspected goods, is noted. Such an Order was made prohibiting the importation of shaving-brushes manufactured in Japan, for it was found that infectious brushes were being imported from that country. This, together with the destruction of a large number of shaving-brushes suspected of anthrax infection, appears to have prevented the occurrence of further cases. An interesting point about the case recorded by Thomsen and Jensen is that even where there is reason to suppose that disinfection has been carried out there is no guarantee whatsoever of its efficiency; private disinfection is therefore an additional safeguard. This article, written in excellent English, is published, together with several other articles in English, in *Acta Pathologica et Microbiologica Scandinavica*, vol. i, Fasc. 2, 1924.

PATENT MEDICINES.

DR. J. B. COHEN, F.R.S., professor of organic chemistry in the University of Leeds, recently gave an address on "patent medicines" to a meeting of the Norwich Rotary Club. He began by making a quite unnecessary apology for, as a chemist, intruding on the domain of medicine. In the matter of synthetic drugs, to which Dr. Cohen first referred, the medical profession is entirely dependent on the chemist, who has sometimes presented it with drugs of undoubted value, such as, for instance, the arsenobenzol series. The synthetic chemist, Professor Cohen said, produces substances having a definite composition and exerting definite physiological effects; they can be prescribed in doses ascertained by scientific methods. This scientific development of drugs had to compete with the quack nostrum vendor, but on unequal terms, because, whereas the latter advertised, generally in grossly exaggerated terms, the scientific chemist gave his knowledge freely. He recalled how the British Medical Association had published two books—*Secret Remedies* and *More Secret Remedies*—which contained analyses and descriptions of patent medicines and other particulars about them. The revelation was so astonishing that the Government appointed a Select Committee on Patent Medicines in 1914; unfortunately its report was published just before the outbreak of war. The Committee had summarized the situation regarding the sale and advertisement of patent and proprietary remedies

as follows: "For all practical purposes British law is powerless to prevent any person from procuring any drug or making any mixture, whether potent or without any therapeutical activity whatever (so long as it does not contain a scheduled poison), advertising it in any decent terms as a cure for any disease or ailment, recommending it by bogus testimonials, and the invented opinions and facsimile signatures of fictitious physicians, and selling it under any name he chooses, on the payment of a small stamp duty, for any price he can persuade a credulous public to pay." Some patent medicines, Professor Cohen continued, were fraudulent nostrums, dangerous remedies used for improper purposes, or fraudulent preparations used for misleading their victims, such as alleged cures for cancer, consumption, and epilepsy. After dealing in detail with some of the advertised patent medicines, he said that serious injury might be done to the public by misleading prescriptions and excessive claims, yet their sale and advertisement were unrestricted and uncontrolled by law, and so hedged in by legal anomalies that to attempt prosecution for fraud was merely to court failure. He then read out the recommendations of the Committee, which had found that for many secret remedies grossly exaggerated claims of efficacy were made, "causing injury by leading sick people to delay in securing medical treatment; containing in disguise large proportions of alcohol; sold for improper purposes; professing to cure diseases incurable by medication; or essentially and deliberately fraudulent." This class of remedies, the report continued, "contains none which spring from therapeutical or medical knowledge, but they are put upon the market by ignorant persons, and, in many cases, by cunning swindlers, who exploit for their own profit the apparently invincible credulity of the public." This, the Committee concluded, constitutes a grave and widespread public evil. Viscount Astor, when Parliamentary Secretary to the Ministry of Health, prepared a Proprietary Medicines Bill, which was read a second time in the House of Lords. It passed through committee and was reported to the House; this was in July, 1920, but since then nothing has been done. We are, however, glad to note some evidences of an increasing public realization of the evil consequences of this traffic. The discussion by the Publicity Club of London last November (reported in the SUPPLEMENT of November 22nd) is a sign that proprietors of some of these preparations are beginning to realize that their position is open to criticism, and there has recently been gratifying evidence that the newspaper press is becoming alive to its responsibilities.

THE HEBREW UNIVERSITY, JERUSALEM.

THE new Hebrew University of Jerusalem will be opened by Lord Balfour on April 1st. The Jews have already created in Palestine a network of educational institutions, and with the inauguration of the university the foundations of a complete educational system will have been laid. The purchase of a house on Mount Scopus, built by the late Sir John Gray Hill, had been just effected in 1914, to serve as part of the university, when the outbreak of the war stopped the work for the time being. On July 24th, 1918, the foundation stone of the university buildings was laid, and Professor Geddes and Mr. Mears drew up designs, which were exhibited at the Royal Academy in London. It is proposed that the university shall start as a research centre primarily, with a view to promoting an intellectual atmosphere and the achievement of a very high level of scholarship. The medical department was founded in the spring of 1921, and a research laboratory for microbiology is now almost completed. It is expected that work in this microbiological institute will begin in the late summer of this year. An *x*-ray, therapeutic, and diagnostic institute has also been equipped, and the American Jewish Physicians Committee is now engaged in raising funds for the erection of a modern university hospital. As soon as the necessary amount has been collected the committee will begin to erect a medical college, with laboratories for physiology, anatomy, histology, and pathology, lecture rooms, and accommodation for post-graduate instruction and tropical health work. An undergraduate school will slowly evolve. The committee hopes to institute at an early date visiting lectureships in the various branches of medicine and surgery, to be held by the leading medical teachers of Europe and America. A project is under consideration for a chemical institute comprising two departments, one for general chemistry—both synthetic and analytic—and the other for biochemistry. An institute for Jewish studies is planned to be a centre for promoting the knowledge of Hebrew and cognate languages, Jewish literature, history, and philosophy, and also for advanced research and instruction for selected pupils. A Jewish national library is being organized, and there are already 250,000 cards in the catalogue. Many books have been presented by various European Governments, the British Museum, and the New York Public Library. A special medical department of the library was opened in the summer of 1923, and is provisionally housed in the Pasteur Institute. The university will be open to students of all creeds, races, and nationalities.

STEEL HOUSES IN LONDON.

A COMMITTEE appointed by the Minister of Health to consider new materials and methods of building for working-class houses has reported on constructions in steel, concrete, timber frame (with external steel plate), and burnt clay block, and it is now proceeding to arrange for domestic architecture in steel to be exhibited for the instruction of the public. On the recommendation of this committee, the Minister of Health has desired the London County Council to arrange for the erection of two small two-story houses having a steel frame or skeleton, after the design of James Wild and Co. (Housing), Limited, of Manchester. A suitable site on one of the Council's housing estates, where the erections can easily be inspected, is likely to be taken for the purpose. The price of erection of these houses, which are to be of the non-parlour type, with three bedrooms, is £435 each, this sum to include the necessary work on drains, paths, and fences. Towards the cost of providing the two houses the Government is prepared to contribute £400, without conditions of any kind, but no further subsidy will be payable, and the houses when erected will be the property of the London County Council. Meanwhile a steel house of another design has been put up, temporarily and for demonstration purposes only, in one of the principal London thoroughfares. This is a one-story dwelling built by the Consteelwood Company, Limited, on an L.C.C. site in Upper Tooting Road. The house consists of five rooms, the largest measuring 14 ft. by 12 ft., and includes all the appurtenances of kitchen and bathroom. The walls are of galvanized steel laid upon a standardized wooden framework; the treatment of the metal with zinc prevents the rust which would otherwise be inevitable on steel plate, and the sheets are carefully interlocked at the joints so as to make the house weatherproof. An inner and outer sheet of steel are used, each sheet being backed by a layer of felt, and between the two layers is a space of 4 in., which can be left empty or filled with "breeze." All the metal, instead of being left flat as in other steel houses, is stamped in relief so as, with ingenious painting, to resemble externally a rough-cast stone, and internally an oak panelling or a white tiling as desired. Here we have, not the lath painted to look like iron, but the iron, or steel, painted to resemble more usual building constructions, but the result is to give a more

substantial and decorative appearance than might be expected from so uncompromising a material as steel. The gabled roof is of wood, with Somerset tiling, the chimneys and flues are of concrete, the foundation of the house is a concrete raft, above which is a damp-course, and a jointless flooring. The price of the house is £450, or, if the parlour be omitted, £385, allowing for a weekly rental of 15s. or 12s. 6d., including rates and taxes. The house was erected within seven days, and decorated within another seven. The steel-frame house is well known in many parts of the world, especially British Columbia, but it has still to adjust itself to the British climate. On the occasion of the house warming by the Mayor of Wandsworth, the little bungalow, with the daffodils in the front garden, the red tiles on the roof, and the dainty furniture which an enterprising firm had installed, had the appearance of an ideal cottage home. The builders laid stress upon its permanence (claiming for it a life equal to the ninety-nine years of the ordinary lease), its dryness, and the ease with which parts could be replaced or the whole redecorated. They could also claim, of course, that although some people may have a prejudice against being encased in steel, a not inconsiderable and a very healthy portion of the population do in fact live within steel walls already—namely, the officers and men of His Majesty's Navy when serving afloat.

EXPERIMENTS ON DOGS.

SIR FREDERICK BANBURY, when in the House of Commons, used to introduce a bill with the title, the Dogs Protection Bill. It was a bill to prohibit any experiment on a dog. It was a hardy annual of varying fortune; once it slipped through the second reading stage, but was eventually rejected by a substantial majority. When its father went to the House of Lords he introduced it there last March; it led to an interesting but one-sided debate, as may be seen by reference to our report of the proceedings (April 5th, 1924, p. 639), for nobody but the mover and his seconder had a good word to say for it, and Lord Banbury did not think it prudent to go to a division. But it would be imprudent to assume that the last has been heard of it. An article by Dr. Herbert Snow published in the *Nineteenth Century* for January is proof that the antivivisectionists still nurse hopes. His article professed to give reasons why such a bill should be passed. Dr. Snow has been, if we remember right, an antivivisectionist for many years, and his reasons are many years old, and all of them have been shown many years ago to rest on want of acquaintance with the true facts or inability to understand them. Dr. Snow, who has come forward or been put forward as a champion of the antivivisectionists, seems to have befogged himself by much reading of antivivisection "literature" and not verifying his facts. Mr. Stephen Paget, vice-chairman of the Research Defence Society,[1] to whose vigilance and well informed defence of physiology and experimental medicine the profession has long owed a deep debt of gratitude, has made a reply, brief but all the more effective on that account, in the *Nineteenth Century* for March. Mr. Paget takes up a number of the assertions echoed by Dr. Snow, and one by one shows that they are foolish or contrary to the facts, or both. Mr. Paget has unearthed a statement in one of the antivivisection magazines from which it would appear that the antivivisectionists are beginning to pose as martyrs. The writer said, "We and our propaganda are extremely unpopular. We are disliked excessively, I may say loathed." Some of them do not like to be called "antivivisectionists"; but what would they prefer? "Obstructionists" or "obscurantists" would not be sufficiently specific.

[1] The annual subscription to the Research Defence Society is 10s. It publishes a quarterly periodical with the title *The Fight against Disease* (price 6d.). Its offices are at 11, Chandos Street, Cavendish Square, London, W.1.

A MEDICAL STUDENT IN GLASGOW NINETY YEARS AGO.

DR. J. H. ALEXANDER[1] has had the happy idea of publishing some notes of his father's student days in Glasgow in the early thirties, when memories of the Napoleonic wars were still the subject of much reminiscent conversation. Early in his career (1832), as a follower of Hippocrates, he had the experience of watching the invasion of Glasgow by cholera, and of the first death, in a flat above that in which he lodged. The Medical Board exerted itself to stay the plague by fumigating the infected houses, by preventing anyone from entering or leaving towns or villages if it was known that he or she came from an infected district, and by offering senior students a guinea and a half a week to attend cholera patients. But in spite of all the well meant efforts the mortality was such that in some towns carts went round during the night to collect the dead, some in coffins, others without; the corpses were buried in trenches, often in land outside the graveyards; the conditions thus resembled those so vividly described by Walter G. Bell in his account of the great plague of London. The anatomical rooms were in those days largely dependent for supplies upon the body-snatchers, as graphically described by Robert Louis Stevenson's story in *Tales and Fantasies*. William Alexander's account of the activities of the resurrectionists in 1833—which was after the execution of Burke (1829) for murders with the object of supplying anatomical subjects—describes how the exhumed corpse in a sack was placed upright in a gig between the two resurrectionists and driven off from the rifled grave. As much as £12 to £14 was paid for a body, but the risks were not slight, for the relatives of the deceased would lie concealed in the churchyard night after night with arms, fully determined to resist even to bloodshed. He tells the story of a student who, on returning to Glasgow after the Christmas holidays, found his dead sister laid out on one of the dissecting-room tables. The account of operations without anaesthetics and antiseptic or aseptic precautions is enough to make the reader thankful that he did not live in "the good old times."

[1] *Glasgow Med. Journ.*, 1925, ciii, 37-44

THE HOME AMBULANCE SERVICE.

SHORTLY after the armistice a number of motor ambulances which had been maintained in Northern France by the British Red Cross Society and the Order of St. John were liberated, and the two bodies appointed a Home Service Ambulance Committee, which worked out a scheme for stationing ambulances at convenient points throughout England and Wales and Ireland, so that one should always be available for accidents or for the removal of sick persons or convalescents to hospitals or to their own homes. The scheme met with very general approval, and the ideal put before the committee has now nearly been attained. At the end of last year it had 342 ambulance stations in the country and 33 affiliated stations, making a total of 375. The number of stations in the various counties varies according to local needs, and the number of patients carried varies also: thus, in West Lancashire, with 11 ambulances in service, 63,000 patients have been moved; in the West Riding, with 14, over 21,000; in Durham, also with 14, nearly 16,000; and in Essex, with 15, about the same number. In the agricultural counties the number of patients moved has, of course, been smaller; thus, in Kent, with 16 ambulances, 7,300 patients were handled, and in Cornwall, with 6 ambulances, about 1,900. As a rule the ambulances are controlled by the county director, but in Wales special arrangements are being made. In Southern Ireland the scheme has not been developed to the extent desired, but in Northern Ireland, with 14 ambulances, nearly 9,000 patients have been moved. Since the Home Ambu-

lance Service was instituted municipal bodies have shown a greater tendency to set up ambulance services of their own, but in many cases they have preferred to depend on the Home Service Committee for the control of this work. Thus, the city of Plymouth has delegated the whole of its ambulance transport work, including the carriage of crippled children to special schools, to the Plymouth centre of the St. John Ambulance Association, which works in association with the Plymouth division of the British Red Cross. A private telephone line connects the central police with the ambulance stations, which are also included in the borough fire alarm installation, so that the ambulance is called simultaneously with the firemen, and a car follows each fire engine. At Bolton in West Lancashire the ambulances, working under a joint committee and staffed by members of the brigade, carried nearly 17,000 cases during 1924, and here again the work done includes much for the public health authorities and also for the education authority in connexion with crippled children. Whatever service is eventually set up, it must depend for its efficiency on the co-operation of trained attendants, and the Home Ambulance Committee aims at bringing all its ambulances into the charge of units of the order or society. Already the system has brought many recruits, so that it has promoted and encouraged the acquisition of skill in first-aid treatment. There is a vastly greater incentive to go through a course of first-aid training when the student knows that his skill will be put to constant use in connexion with the ambulances than if he may only be called upon to exercise it occasionally and at long intervals.

THE BRITISH ASSOCIATION MEETING, 1925.

ARRANGEMENTS are well on the way to completion for the next annual meeting of the British Association, which takes place at Southampton from August 26th to September 2nd; the programmes will be issued shortly. The President is Dr. Horace Lamb, F.R.S., the author of many papers on mathematical physics, and formerly professor of mathematics in the Universities of Adelaide and Manchester. The sections number thirteen, and the presidents of four of them are as follows: physiology, Professor A. V. Hill, F.R.S., of University College, London; psychology, Professor C. E. Spearman, F.R.S., also of University College; anthropology, Dr. Thomas Ashby, director of the British School of Archaeology at Rome; and education, Dr. W. W. Vaughan, head master of Rugby. The proceedings will include a number of joint discussions between different sections. The sections of zoology and physiology will unite for a discussion on the functional significance of size; those of psychology and education, on recent investigations upon functional guidance; and those of physiology and psychology, on the acquisition of muscular skill. Other discussions set down are on health in schools, the disciplinary value of subjects, the training of teachers, and the teaching of biology.

CONGRESS OF RADIOLOGY.

IT has now been decided that the Congress of Radiology in London shall begin on Tuesday, June 30th, with a reception, and that the formal opening shall take place on the following morning, July 1st. Sessions will be held on each of the following days until Saturday, July 4th, when the congress will come to an end, but in the following week visits will be paid to other centres of interest. During the congress an exhibition of radiological and electrical apparatus will be held, and there will also be an exhibition of radiograms, in which dental radiograms will be included. The congress is described as a preliminary meeting of international congresses of radiology, and it is intended that arrangements for the first international congress, its date, and the country in which it should be held, will be decided by an international committee during the meeting in London. Electrotherapeutics and allied subjects will be included within the scope of the congress, and radiological and electrotherapeutic societies are invited to send representatives to serve on the international committee. The congress in London will be of an international character, inasmuch as radiologists from every country are invited to take part. The fee for membership is £2 2s. The object of the congress is to bring together radiologists from all parts of the world. Papers may be read in the language selected by the author, but it is desired that they should be approved by a recognized society of which the author is a member. It is also asked that a short abstract shall be provided, and English translations of all documents "will be much appreciated." The president of the congress is Mr. C. Thurstan Holland, Ch.M., of Liverpool. The chairman of the organizing committee is Dr. Robert Knox, and the secretary-general is Dr. Stanley Melville. The headquarters of the congress are at the British Institute of Radiology, 32, Welbeck Street, London, W.1. The secretaries, addressed there, will be glad to supply full particulars.

INFLUENZA.

LAST week the number of deaths in the great towns of England and Wales was almost the same as in the previous week—352, against 354; in London the number decreased from 92 to 88. Four cities or towns other than London had 10 or more deaths—namely, Stoke-on-Trent (10), Manchester (16), Leeds (13), Stockton-on-Tees (11). Two had 8 each—Birmingham and Preston; one 7—Bradford; four 6—Nottingham, Hastings, Liverpool, and Sunderland. The notifications of pneumonia have also decreased—from 1,742 to 1,473; only in the North and in Wales was there any increase. It appears, then, that the wave of influenza is at or near its maximum. If so, this recrudescence is definitely less severe than that of last year, although the total number of cases has probably been very large. The King, we are glad to note, has been able to leave his bed, and may now be considered convalescent.

THE KING has appointed Dr. John M. Cowan, physician to the Royal Infirmary, Glasgow, to be one of the Honorary Physicians to His Majesty in Scotland, in the room of Sir James Mackenzie, F.R.S., deceased.

AT the social evening at the Royal Society of Medicine on Monday, March 16th, the guests will be received by the President, Sir StClair Thomson, at 8.30 p.m. The library will be open and various objects will be exhibited. At 9.30 Dr. H. C. Cameron will give an address on "John Locke, the philosopher (1690), on the upbringing of children." No cards of admission are required, and Fellows are invited to bring friends.

THE first award of the Sir Robert Jones Medal and British Orthopaedic Association Prize of £50 has been made to Mr. G. Perkins, F.R.C.S., assistant surgeon to the Royal National Orthopaedic Hospital, for his essay on "The diagnosis, treatment, and end-results of tuberculous disease of the hip-joint." The subject of the essay for 1925 is "The classification and differential diagnosis of the different forms of arthritis." Essays, which must be submitted by December 31st, 1925, should be sent to the Honorary Secretary of the British Orthopaedic Association, Mr. R. C. Elmslie, M.S., 1A, Portland Place, London, W.1.

WE regret to announce the death of Dr. J. J. Graham Brown, a former President of the Royal College of Physicians of Edinburgh, and consulting physician to the Royal Infirmary, Edinburgh.

PARALYSIS AGITANS AND POST-ENCEPHALITIC CONDITIONS.

PROFESSOR CRUCHET'S LECTURE.

UNDER the auspices of the University of London, at the Royal Society of Medicine, on February 25th, with Sir James Purves-Stewart in the chair, Professor RENÉ CRUCHET of the University of Bordeaux gave a lecture on the relation of paralysis agitans to the Parkinsonian syndrome of epidemic encephalitis.

Sir JAMES PURVES-STEWART referred to the closer and more appreciative understanding between English and French physicians which had grown up since the war. It would be interesting, he said, to listen to a lecture by such a distinguished French physician on a malady such as Parkinson's disease, which was so essentially English.

Professor CRUCHET began by explaining how in 1917, when he described what he believed to be a new disease under the name of "subacute encephalo-myelitis," which later became "encephalitis lethargica," he observed in several cases that an immobile face existed from the onset of the disease, and that this Parkinsonian appearance was, however, quite different from Parkinson's disease. Later, with the opportunities afforded by the epidemic of 1919-20, these Parkinsonian symptoms of encephalitis lethargica became much more common, but they were still to be differentiated from true paralysis agitans. Confusion between these two diseases, however, was very evident owing to the fact that they had certain symptoms in common. Such symptoms had been isolated by Professor Cruchet under the term "bradykinetic syndrome."

The Bradykinetic Syndrome.

This syndrome, he said, consists essentially of slowness of movement; this is associated with immobility, fixed attitude, kinesia paradoxa, and, according to some writers, muscular resistance. The immobility is most strikingly shown in the expression of the face—the so-called "Parkinsonian mask," not, however, described by Parkinson. This immobility is also shown by the absence of many other characteristic little movements which constitute individuality. The fixed attitude generally consists of a bending forward of the body with a neck shrunk between the shoulders and arms slightly flexed with the hands brought towards the abdomen. Slowness of movements is especially striking on the face: emotional expressions lack spontaneity. Even the movements which have become automatic by habit become stiff and slackened. This slowness is strikingly shown in certain occupations where patients take four or five times the usual number of hours to do a piece of work. This slowness of movement is quite different from that seen in people who are slow from birth or by temperament, in that it is stiff and lacks spontaneity. The movements are, however, perfectly co-ordinated. The more a certain act goes on or is repeated the slower it becomes until it finally stops. Paradoxical kinesia, as described by Souques in 1921, is shown by certain patients who, only able to walk slowly and with difficulty, sometimes find themselves able to run for a brief period of time. This sign, occurring in paralysis agitans, was recognized by Parkinson. With regard to muscular resistance, Professor Cruchet thought that the rigid appearance of patients with the bradykinetic syndrome had given rise to a preconceived idea of muscular resistance, and even of hypertonus. This he believed was by no means essential to this syndrome, and except in a few advanced cases of paralysis agitans he had never found true rigidity occur. The bradykinetic syndrome was common to a certain number of morbid states and, in addition to the two diseases here discussed, could be found in progressive lenticular degeneration, in disseminated sclerosis and pseudo-sclerosis, dementia præcox, and it might even become spasmodic, as described by Professor Cruchet in 1906, in certain forms of spasmodic torticollis. In Parkinson's disease, he said, the bradykinetic syndrome is present, but strangely enough Parkinson did not mention the peculiar immobility of the face which occurs, perhaps because it was such an obvious phenomenon. Parkinson was more concerned with the difference of his disease from ordinary paralysis, where the onset is sudden, and with two striking features—namely, the shaking and the bending forward of the trunk. The latter has been shown to be characteristic of the bradykinetic syndrome. Parkinson's description of the patients who were "irresistibly impelled to take much quicker and shorter steps, and thereby to adopt unwillingly a running pace," was that of kinesia paradoxa. The tremor particularly attracted the attention of Parkinson; it appears very early in the disease and is often very violent in the later stages. Subsequent writers added the description of "pill-rolling" to some of these movements. Parkinsonian bradykinesia is therefore characterized by its insidious onset at an advanced age, its progressive evolution, its irritable mental state, and the peculiar shaking which exists at rest and disappears in voluntary action.

Post-encephalitic Bradykinesia.

The bradykinesia of the post-encephalitic state (Professor Cruchet continued) is quite complete, although the fixed attitudes adopted are more complex and varied in nature than in Parkinson's disease. Slowness of movement has been carefully studied; it is shown in a very interesting manner if the patient reads aloud. Sudden stops occur at the end of the lines, and later between words and even in the middle of words, until stops become more and more frequent, the voice becomes imperceptible, and a total cessation of reading occurs. Similar stoppages occur in the habitual movements of eating, dressing, brushing the hair, etc. Paradoxical kinesia is strikingly shown in the post-encephalitic state. Patients quite immobile and infirm will rise from the chair in his (Professor Cruchet's) consulting room and begin to dance! Other patients are able to do gymnastic exercises and throw quoits in a skilful manner. Similar occurrences have been described by Arthur J. Hall, who recorded the case of a man who drove a lorry from Sheffield to London and back, and by G. L. Thornton. As indicated previously, no true rigidity exists, as these paradoxical movements prove. In addition to the bradykinetic syndrome certain other symptoms occur which enable post-encephalitic conditions to be marked off from paralysis agitans. Tremor is rare, and in only three cases out of a series of a hundred was it of the true Parkinsonian variety. In other cases it did not occur at rest, but only periodically in certain positions of the limbs, sometimes increasing in intensity as a result of violent exertion. Tremor, when it does occur, does not become progressively worse. The mental state of the post-encephalitic patient is calm and peaceful, although he may be afraid of the slightest movement and prefer to remain in bed. The intellectual state is often slackened, but ideas are clear, judgement intact, memory conserved, and reasoning lucid. This has been called bradypsychia or bradypraxis by Verger and Hesnard. As a result of this "slowness of intellect" patients seem to have taken on a new personality. The onset of post-encephalitic bradykinesia is usually definite, and not vague as in paralysis agitans. Somnolence, diplopia, infectious symptoms like those of influenza, and toxic symptoms are often definite. The knowledge of the epidemic nature of the disease is also important. The age of the patient is important: in paralysis agitans the average age is about 60, while post-encephalitic conditions are commoner in young people, and children are frequently attacked. The course of the two diseases is different: post-encephalitic conditions can get better and even be cured, especially in the early forms. Late forms appearing between six months and two years after the initial attack have a less favourable prognosis, although cases have recovered from advanced phases of the disease. Other differential signs include salivation, early in encephalitis and late in Parkinson's disease, while pupil changes, exaggeration of the knee- and ankle-jerks (without Babinski's sign), and various changes in the cerebro-spinal fluid, especially an increase in Fehling-reducing substances, are all characteristic of post-encephalitic conditions. Curious torsion spasms occur also in these conditions, patients sometimes twisting themselves into incredible attitudes; these are analogous to the torsion spasms described by various authors in 1910 and 1911, and of the same clinical family as Wilson's disease. Professor Cruchet considers the curious spasmodic torticollis cases described by him in 1906 to be of the same nature.

These cases show athetotic and choreiform movements at rest, slowness of all the voluntary acts, a fixed attitude, and certain vasomotor disturbances. Epidemic encephalitis has greatly increased the number of these bradykinetic forms, and their spasmodic nature seems to be a secondary phenomenon. Such associated forms have greatly complicated the already diverse picture presented by encephalitis lethargica. Professor Cruchet concluded by indicating that since the action of the virus of encephalitis in the nervous system is very diffuse, certain cases of the true Parkinsonian type did occur; but this was rare, and from clinical observation it was possible, in the majority of cases, to distinguish between the two diseases. Although the anatomical findings were interesting, the clinical distinction was the more important one for the physician.

At the close of the lecture numerous slides were shown: these consisted of photographs of patients and microphotographs of sections of brain. Various microscopic slides were also exhibited.

Scotland.

ROYAL MENTAL HOSPITAL, MORNINGSIDE, EDINBURGH.

PROFESSOR ROBERTSON'S ANNUAL REPORT.

THE one hundred and twelfth annual report of the Royal Mental Hospital, Edinburgh, for the year 1924 was presented by Professor George M. Robertson, physician-superintendent of the institution, at the annual meeting in the City Chambers, Edinburgh, on February 23rd, when the Lord Provost, Sir William Sleigh, was in the chair. It was reported that 212 patients had been admitted during 1924; including 804 on the register at January 1st, 1924, the total number of cases treated during the year was 1,016. The patients discharged recovered numbered 48 and those unrecovered 84. The number of patients who died was 55, yielding the lowest death rate yet recorded in the history of the institution. With regard to causation, there appeared to be a falling off in cases due to alcoholic excess; only 5 were definitely diagnosed as cases of alcoholic insanity, while the amount of insanity attributable in part to alcoholic excess was 7 per cent. for men and 0.8 per cent. for women, or a total of 3.3 per cent. for both sexes. This showed a marked diminution as compared with the corresponding figures for the seven years before the war, which were respectively 16.4 per cent., 9 per cent., and 12.6 per cent. Influenza seemed to be reappearing as a cause, 6 cases having been attributed to this disease.

Mental Nursing Homes.

Professor Robertson recalled that when the Royal Hospital at Morningside was opened in 1813 it admitted private patients only, and that it now again relied for its prosperity on the admission of this type of patient. Since Craighouse was added to the institution thirty years ago there had been an ever-growing need for expansion. The public had become more and more averse to sending persons suffering from recoverable or mild attacks of mental disorder into mental hospitals, and the managers had given careful thought to the particular form which any new accommodation should take. Seven years ago they decided to establish, quite detached from the mental hospital, nursing homes in which patients suffering from the early stages and curable forms of mental disorder might receive suitable treatment in the expectation that they might recover without being certified or entering a mental hospital. The scheme, initiated in a small way seven years ago, was now fully established. During the whole of last year four fully equipped nursing homes, accommodating about fifty patients, had been in successful operation in the suburbs of Edinburgh, and then a mansion-house in the country for convalescent patients, which accommodated a dozen or more. Recently the managers had purchased Vogrie House, together with 250 acres of land, some distance outside Edinburgh, and in this large building they contemplated further developments of the scheme. In these homes the family physician could treat his own patients exactly as he did in nursing homes for other diseases. The managers merely provided the appropriately equipped home and the necessary staff under the direction of an experienced matron. In this way early and mild cases of nervous breakdown could receive appropriate nursing and care. These homes were also useful for patients suffering from the mental breakdown that often accompanied old age; such cases were frequently very difficult to care for at home, yet no one liked to send an aged parent or relative in this condition to a mental hospital. The number of patients admitted into these homes during the year 1924 was 111, and the total number treated in them was 145. Professor Robertson mentioned that two matters connected with such homes should not be lost sight of. One was that such homes should start under disinterested management and only under the aegis of bodies who had already had some experience of the provision needed; the other was that such homes must be under the supervision of the department which keeps under observation places for the treatment of patients in an analogous condition—namely, the General Board of Control. Unless this were done he felt that scandals might arise from the adoption of inefficient methods and from the possibility of injustice to certain patients. The necessary supervision need not be obtrusive to be efficient.

Voluntary Admission to Mental Hospitals.

The subject of voluntary admission had developed during the last ten years, but mainly during the last five, and it had indeed grown in Scotland into such favour and to such proportions as to amount to a revolution in the practice with regard to mental diseases. The change was initiated by a simple alteration of the existing procedure introduced into the Act of 1913. Previously the sanction of one of the Commissioners had to be obtained before a voluntary patient could be admitted to a mental hospital. The time required to obtain this sanction caused delay, which was both inconvenient and dangerous, and the Act of 1913 gave authority to the medical superintendent to admit the patient at once upon a simple application made directly to himself. The ease, convenience, and promptitude of this procedure had proved so attractive that the admissions of voluntary patients into mental hospitals in Scotland rose from 112 in 1913 to 181 in 1914 and to 263 in 1919; during the quinquennium 1919 to 1923 the total admissions of voluntary patients had amounted to 1,672. In consequence of this it was now found that 40 per cent. of all the private patients entering mental hospitals in Scotland did so as voluntary patients, and that this percentage was increasing every year. This method formed an ideal alternative to certification, and it was not straining language to call this development a revolution of most happy character, and one that was desired by the public. If to the number of voluntary admissions were added the cases placed in the Royal Hospital at Morningside under the authority of a medical certificate of emergency, it would be found that no less than 95 per cent. of all the cases were admitted without a judicial order. It therefore appeared that the abolition of judicial orders was not so revolutionary a step as it would seem, for no harm appeared to have resulted from the absence of an order in the cases mentioned. A hardship existed in relation to the admission of voluntary patients into certain kinds of mental hospitals in that the Government grant-in-aid of £7 9s. 6d. a head, which was given to parishes towards the support of certified patients, was withheld from the support of voluntary patients belonging to a parish. Certain parishes, however, notably in Argyllshire, and recently the Edinburgh Parish Council, had decided that the poor should enjoy in future the advantages of voluntary treatment, notwithstanding that this involved relinquishing the grant-in-aid.

Early Treatment.

An important consideration which attached to these two noteworthy developments that had sprung into existence during the last five or ten years was the possibility of earlier treatment. The nursing home offered early treat-

ment to those with ample means, but it did not meet the requirements of those with modest incomes and of the poor. For them, however, early treatment without the hardship of certification could be obtained as voluntary patients in mental hospitals. Professor Robertson expressed the opinion that by avoiding certification and compulsory detention and by great extension of the system of voluntary treatment, especially by placing it within the reach of the poor, a complete change of sentiment towards mental hospitals would in time develop. At present the law, according to modern ideals, provided a Procrustean bed. It was very disconcerting to the medical man who had faithfully carried out the requirements of the lunacy law in accordance with the time-honoured interpretation placed upon it by a Government department like the Board of Control, to find that he might still be mulcted in heavy damages in a court of law.

The Prevention of Mental Disorders.

Associated with early treatment was the modern medical ideal of prevention, and the most important step that could be taken in this direction was to find the causes of mental disorder. These were no doubt numerous, but it was not likely that any of them would stare us in the face by their obtrusive activity. It was much more likely that their action was subtle, indirect, and prolonged; a good example of what was required was the insight now possessed into the causation of cretinism, which was a form of mental defect. The absence of minute quantities of iodine, which came mainly from the sea, in the food and drink, and which was prepared for the body in the secretion of the thyroid gland, was the cause. The cause was infinitesimal, its action was insidious, and it operated through the agency of a gland, yet its effects on the mind were very marked. The far-reaching effects of the absence of vitamins in other deficiency diseases and the absence of sunlight were similar causative factors in several diseases. In this connexion Professor Robertson mentioned that four cases of pellagra had been under treatment in the Royal Mental Hospital last year. In one instance the patient had been already suffering from delusions following upon experiments in spiritualism, and during the summer the skin eruption characteristic of the disease had developed. For a long time this patient had, in consequence of delusions regarding food, been upon the verge of starvation, and there was strong evidence that the absence of some essential food constituent, or some disorder of digestion preventing the assimilation of an essential constituent of food, was the cause of her mental disease.

Much attention had been directed to the important results obtained from the treatment of general paralysis with malarial infection. Whereas the expectation of life of sufferers from this disease was usually about three years, many patients were now alive and some had been so much improved as to be discharged and resume their duties, who, had it not been for the treatment by malarial infection, would almost certainly have been dead. It was necessary, however, that the general paralysis should be recognized by the general practitioner at an earlier stage if the patient was to get the fullest benefit from the malarial treatment. How malaria acted was still a mystery, but the view at present held was that the high fever produced by the malaria (104° F.) destroyed the organisms that caused the general paralysis. It was possible that the same results might be obtained by other fevers such as influenza, or even repeated hot baths. The question of treatment by mental suggestion had also been studied in the Royal Mental Hospital, and another important field for investigation was the critical analysis of the fantasies which various patients showed.

Improvements in Buildings.

Important structural alterations were now approaching completion in West House. These involved improved sanitary arrangements, a complete new system of central heating, hot-water supply, electric lighting, lifts, telephones, and fire alarms, together with redecoration of the institution.

EDINBURGH CLINICAL MEETING AND DINNER.

The winter clinical meeting organized by the Edinburgh Branch of the British Medical Association was held on February 27th in the Royal Infirmary, Edinburgh, and proved to be one of the best of its kind that have ever been arranged. The programme drawn up by Mr. F. E. Jardine was excellent throughout. The museum, arranged in the pathological department, was open from 10 a.m. to 6 p.m.; the specimens covered a wide range of interest. In the dietetic department of the Royal Infirmary there was a demonstration of foods showing the calorie value of prepared dishes. In the morning a number of demonstrations of a practical kind were given in the various departments, and the afternoon was given up to an organized clinical demonstration with Dr. Robert Thin (president of the Branch) in the chair. The audience, comprising members and a limited number of senior students, filled the large surgical theatre.

The dinner held that evening in the Caledonian Station Hotel, with the president of the Branch in the chair, was attended by 45. The guests included Sir Robert Philip; Mr. Alexander Miles; Colonel StC. Thom, medical superintendent, Royal Infirmary; Professor Lorrain Smith, Dean of the Medical Faculty; Dr. J. R. Drever, Scottish Medical Secretary, British Medical Association; Dr. W. T. Blakely, president Glasgow and West of Scotland Branch; Dr. John Hume, honorary secretary Perth Branch; Dr. E. E. Dyer, honorary secretary Stirling Branch; Dr. G. F. Whyte, Dundee Branch; Dr. D. G. Anderson, president Edinburgh Royal Medical Society; Dr. Colquhoun, president of the University Union; and Dr. Tingley, representing the resident staff of the Royal Infirmary. The toast of the British Medical Association was proposed by Sir Robert Philip, and responded to by Dr. Drever; that of the Edinburgh Medical School by Dr. W. T. Blakely, and responded to by Mr. Miles. The health of the guests was proposed by Professor George M. Robertson, and responded to by Professor Lorrain Smith and Dr. D. G. Anderson. The President's health was proposed by Dr. J. V. Paterson and acknowledged by Dr. Thin. The toasts were interspersed with an excellent programme of music contributed by members present. A very enjoyable evening was spent.

CLINICAL RESEARCH AT ST. ANDREWS.

During the month of June a post-graduate course will be conducted by the staff of the James Mackenzie Institute for Clinical Research at St. Andrews. The ideals and methods of the institute will be described, and clinical lecture demonstrations will be given on such subjects as the mechanism and significance of cardiac irregularities, the meaning of abdominal pain, suspected tuberculosis in children, and case-taking in general practice. Lantern lectures on ophthalmic subjects will be delivered. Professor Waterston will lecture on the structure and development of the heart from the functional standpoint, and also on the innervation of muscle. Physiological lectures will be given by Professor Herring, and Dr. N. MacLellan will deal with clinical pathology. Dr. Hynd will deal with chemical examination of the urine and blood analysis, including the estimation of blood sugar. Clinical lectures will be given at the Royal Infirmary, Dundee, and the radiological section will include the interpretation of radiograms, and consideration of the chest of the normal infant. Further information may be obtained from the Secretary of the Institute, St. Andrews, Fife.

GLASGOW STUDENTS' SUPPORT OF HOSPITALS.

A meeting of the Executive Committee of the Students' Representative Council of Glasgow University was held on February 25th, when the proceeds of the Students' Charities Day, held on January 19th last, were allocated. The sum available for distribution was £7,148, and it was agreed as a general principle that part of the proceeds should be used for the endowment of beds in certain of the larger hospitals. Two years ago beds were endowed in the Royal and Western Infirmaries, and it was agreed that out of the amount available this year £1,500 should be allocated each to the Victoria Infirmary and the Royal Hospital for Sick Children, for the endowment of beds.

Other sums allocated were: Glasgow Royal Infirmary £600, Glasgow Western Infirmary £600, Glasgow Royal Maternity Hospital £300, the Ear, Nose, and Throat Hospital £300, the Royal Samaritan Hospital £250, the Eye Infirmary £100, and similar sums to four other medical institutions.

GLASGOW WESTERN INFIRMARY.

The annual report of the Glasgow Western Infirmary for 1924, which is the jubilee year of the institution, shows that during the year 9,871 cases were admitted to the wards, and 35,809 were treated in the out-patient department. The training school for nurses, the school of massage, and the *x*-ray and electrical department were all reported as being carried on with success. One ward was endowed during the year with a sum of £40,000 received from the trustees of the late Mr. John Ross, Bearsden. With regard to the proposed biochemical department, a donation of £5,000 has been received, but progress is delayed as this department would involve an expenditure of about £25,000, for which further donations are solicited. With regard to finance, there is a deficit of £10,937 in the ordinary income, but, after providing for this out of extraordinary income, and for £19,399 of extraordinary expenditure, there is still a surplus of £64,433, which has been carried to capital. Together with a balance from the previous year there is now available an unrestricted capital sum of £124,329. It is pointed out that the deficit in ordinary income of £10,937 is the smallest that has had to be recorded since 1906, and that the ordinary expenditure is still steadily decreasing.

GLASGOW ASSOCIATION FOR THE RELIEF OF INCURABLES.

At the fiftieth annual meeting of the Association for the Relief of Incurables in Glasgow and the West of Scotland Lord Provost Montgomery, who presided, said that the association had been founded in 1874 and the home at Broomhill had been opened in 1876 with 39 patients; it was eloquent of the progress of the home that last year 330 patients had been under its care. Amongst those in the home at the close of last year were two women, of whom one had been admitted as a schoolgirl in 1877, while the other, admitted in middle life, was now aged 91 years. This indicated the care and attention bestowed on the patients and the great burden from which relatives were relieved by their admission. The income last year was more than in the previous year, while the expenditure was less, and the subscriptions from employees of works, etc., had increased.

CENTRAL MIDWIVES BOARD FOR SCOTLAND.

The examination of the Board, held simultaneously in Edinburgh, Glasgow, Dundee, and Aberdeen, has recently concluded. Out of 123 candidates 115 passed. Of the successful candidates 24 were trained at the Royal Maternity Hospital, Edinburgh; 34 at the Royal Maternity Hospital, Glasgow; 6 at the Maternity Hospital, Aberdeen; 11 at the Maternity Hospital, Dundee; 10 at the Queen Victoria Jubilee Institute, Edinburgh; 10 at the Cottage Nurses' Training Home, Govan, Glasgow; and the remainder at various recognized institutions.

England and Wales.

DISTRICT NURSING IN LONDON.

THE tenth annual report of the Central Council for District Nursing in London describes the activities of the council during the year ending December 31st, 1924. The gaps in the District Nursing Service of the counties of London and Middlesex received special attention from the council's executive committee, which has been able to arrange for extensions into large and needy areas on the outskirts of London. Such large populations as those of Willesden and Tottenham were particularly difficult to deal with owing to the small number of persons of leisure able to render practical assistance. The Southgate Association has been extended, a new association has been established at Hanwell, and the Harringay division of Hornsey has been taken over by the North London District Nursing Association. Grants have been made to these districts and promised to Tottenham and Willesden, where it is hoped that associations will be started before long. Towards the end of the year under review careful consideration was given to the particulars required from various nursing associations in connexion with the allocation of these grants, and an attempt has been made to prepare a uniform schedule so that the costs of the service may be readily ascertained, and also the nature and extent of co-operation with public authorities. During the year the committee decided to distribute £1,800 from funds in hand. The trustees of the London Parochial Charities entrusted the council with £2,000 for distribution and £300 for administrative work; they also gave £500 primarily for the extension and establishment of district nursing in Greater London. The sum of £617 12s. 2d. was paid to the council by the Ministry of Health in respect of midwifery and maternity nursing arranged by certain associations. Contributions were also received from the Clothworkers' and Grocers' Companies and the Society of Apothecaries. The representatives of the British Medical Association on the Central Council are Mr. E. B. Turner, Dr. T. W. H. Garstang, and Dr. William Paterson.

PONTEFRACT INFIRMARY.

The new wing of Pontefract Infirmary was opened by Princess Mary, Viscountess Lascelles, on February 26th. The new building had been originally intended as a memorial to the late King Edward, and tenders for its construction had already been received when the outbreak of war compelled postponement of the undertaking. The original estimate of the cost was £6,000, but the actual expenditure had exceeded £12,000, which had, however, already been raised. A further fund, inaugurated by the Mayor, had provided £1,200. The accommodation of the institute had been thus increased from fifteen beds to forty. The president, Major C. G. Lyon, in welcoming Princess Mary, remarked that Lord Lascelles's grandfather, the fourth Earl of Harewood, was a vice-president of the original institution when it was opened in 1812. Sir Berkeley Moynihan, in a short address, moved a vote of thanks to the Princess, which was adopted with applause.

NORTH OF ENGLAND CHILDREN'S SANATORIUM, SOUTHPORT.

At the annual meeting of the North of England Children's Sanatorium, Southport, on February 21st, it was reported that the number of children admitted during 1924 was 1,262, the average duration of their stay being thirty days. The children mostly came from industrial areas, and were suffering from such diseases as chorea, bronchitis, rheumatism, anaemia and debility after fevers and operations. Dr. H. Blumberg, presenting the medical officer's report, remarked that the sanatorium still received a number of patients more or less crippled from infancy, in whom deformity of the limbs had become chronic, and fixation was of little benefit. He regretted that there were not better orthopaedic facilities in the large towns, so that these deformities could be rectified by early and appropriate treatment. Except on one or two occasions, when the admission of patients was suspended owing to outbreaks of infectious diseases, the sanatorium had been continuously full during the year, and for considerable periods there had been a long waiting list. As the result of a ballot organized early in 1924, a sum of £1,741 had been presented to the sanatorium funds, and, apart from this, the income of the institution had increased from £4,717 to £5,253, of which £3,938 represented receipts from patients, an increase of £766 over the previous year. The deficit on the year's working amounted to £107, as compared with £522 in the previous year. It was hoped, therefore, if the beds in the sanatorium could be occupied continuously and public interest sustained, that it would be possible in future years to balance income and expenditure without increasing the charge to patients, and also to clear off the accumulated deficit of past years. In the course of the year Dr. J. B. Stelfox had endowed two cots in the sanatorium in memory of his wife.

Ireland.

LOCAL GOVERNMENT COMMISSION: NORTHERN IRELAND.

At a meeting of the Local Government Commission (Northern Ireland) in Belfast on February 25th, when Professor R. J. Johnstone, M.P., M.D., was in the chair, evidence was given on behalf of the profession of Northern Ireland with regard to the public health system of administration. Dr. J. S. Darling, president of the Ulster Medical Society, Professor W. J. Wilson, professor of hygiene in the Queen's University of Belfast, Dr. W. Lyle, dispensary medical officer (County Tyrone), and Dr. W. Burns, dispensary medical officer (Belfast Union), had been appointed by the Ulster Medical Committee to give evidence. The chief points dealt with were:

1. The great abuse in the issuing of red and black "lines," which were sometimes given out by the wives, children, and even servants in the house of the wardens.
2. Anomalies of salaries and of extent and distribution of areas of districts.
3. General lack of co-ordination and unity, and want of a controlling head.
4. A recommendation that there should be a Ministry of Health for Northern Ireland, with a statutory advisory committee. This Ministry could be under one of the existing Ministries, with a specialized officer and a chief executive medical officer.
5. That housing should be under this Ministry.
6. That there should be county health committees of the county councils, each with a whole-time medical officer as its chief executive head, and with representatives from various bodies, such as insured societies, child welfare and school attendance committees, etc. The boards of guardians and rural district councils should no longer be concerned with hospitals, as they were not elected for that purpose.
7. That each whole-time county medical officer of health should be responsible for the health of the county, and the dispensary medical officers, as local health officers, should report all matters to him, and leave prosecutions, etc., in his hands.

Dr. Lyle thought that there was a majority of opinion in favour of reverting to the old dispensary committees. The unanimous considered opinion of the Ulster Medical Committee was that Insurance Acts benefits should be extended to Northern Ireland, provided that the interests of the dispensary doctors were adequately provided for, but that this was more in the interests of the community than of the doctors; the working classes thought they were being deprived of something which was being granted to their brethren in England. Dr. Burns considered the dispensary system out of date, and that the benefits under the Act would have an elevating effect upon the working man. It was recommended that all rate-aided hospitals should be managed by local committees under the county health committees: they should be graded as central hospitals for large areas, and hospitals of the type of cottage hospitals for the smaller centres of population; in addition there should be special hospitals and hospitals for incurable cases. A large laboratory for pathological work should be set up in Belfast, with a full equipment to undertake all pathological, bacteriological, and biochemical work for the health authorities of Northern Ireland. At present, Professor Wilson stated, the University provided a laboratory free of charge, and paid for a staff of assistants to enable him to discharge this duty; some county councils paid a retaining fee, for which he had to do the necessary work, but it did little more than pay incidental expenses for electric light, and so on.

THE VETERINARY MEDICAL ASSOCIATION.

The council of the Veterinary Medical Association (Irish Free State) had under consideration at a recent meeting the report of the discussion in the Senate on the amendment to the public health section of the local government bill specifically providing for the veterinary inspection of dairy cows and of meat. From the discussion it might, it was thought, be inferred that veterinary surgeons were only employed under the Public Health Acts for the purpose of inspecting milk and meat as they were presented for human consumption, no mention having been made of their indispensable services in inspecting the sources of these food supplies—the dairy cows and the carcasses of beasts in the slaughterhouse. The veterinary profession, it was said, wished to make its position clear, and to inform the public of the danger of diseases being communicated from animals to man through the consumption of milk and meat from diseased animals; 80 per cent. of the cases of abdominal and glandular tuberculosis in children were contracted by drinking milk from tuberculous cows. Septic sore throat in the human subject had been attributed to drinking milk from cows with diseased udders. Many fatal cases of meat poisoning had ensued from the consumption of meat from carcasses that had been affected with disease or had been improperly handled. It was, therefore, of vital importance to the health of the community that qualified veterinary surgeons should be made responsible for the inspection of dairy cows and of milk, of carcasses of animals slaughtered for human consumption, and of meat stores. To ensure this it was obviously a wise step on the part of the Minister for Public Health to have had an amendment inserted in the public health section of the bill specifically providing for veterinary inspection under the Public Health Acts, otherwise it would not be compulsory by law to have this inspection conducted by qualified men. Apart from the public health point of view, inspection was essential in connexion with the export trade in meat in order to ensure the standard of the meat exported. In the United States, Canada, Australia, New Zealand, and the Argentine all the meat exported had to be inspected by veterinary surgeons. In all the large cities of Great Britain veterinary surgeons were now appointed for the inspection of dairy cows, milk, and meat.

France.

[FROM OUR OWN CORRESPONDENT.]

M. JUSTIN GODART, Secretary of State for Hygiene, has declared war on the abuse of the public by advertisements of drugs and the like in the general press. He has written a letter to the editors of the lay papers suggesting, perhaps rather sceptically, that the word "cure" should never be printed, and that anyone who offers his services in a medical capacity should do so under his own name, and accept full responsibility. We are rather afraid that M. Godart's action will not go beyond the stage of good intentions. The publishers who derive a substantial income from so-called medical advertisements are not very likely to commit hara-kiri unless some stringent law takes hold of their trembling hands. The medical profession would probably be content if, to begin with, the great publicity given to venereal quackery were checked. We think, indeed, that the best way of dealing with these problems is to open wide the doors of our hospitals to the public and to retort on the quacks by making more widely known the help the hospitals are always ready to render. It is a curious, but after all quite explicable, fact that since patients (paupers excepted) have had to pay a small fee, even in the out-patient department, consultations there are far more highly valued.

La Robe Rouge.

It is with great regret that we see the popular master, Professor Letulle, retire from the chair of pathology in Paris. He is succeeded by his pupil Dr. Roussy, well known for his work on cancer; he was, with the late Professor Bergonié, one of the founders of the anticancer centres in France.

An Ominous Verdict.

Dr. Roussy's name came rather prominently before the public when he was called to the witness-box some weeks ago in the Uminska case. A patient, a Pole, was shot in his wards by a young actress. It appeared that the man was dying from advanced cancer, and that he himself had begged the woman he loved to put an end to his agony. The mere statement of facts by Dr. Roussy raised such a wave of sentimental pity that the prosecution was swamped, and the jury very nearly congratulated the woman. The consequences of the verdict were practically immediate, for we have just heard of a sister, in similar circumstances, shooting a younger sister who was suffering from tuberculosis. It is the old problem of euthanasia confronting us again, but now the public is giving the answer. We are

afraid of what is coming next. Heirs may prove to be too kind-hearted, and certainly we shall have to be more than cautious when asked to give a prognosis. The new world still needs the old commandments.

Bacteriolytic Action of River Waters.

Professor Arloing has presented to the Academy of Medicine a striking report on the antimicrobic action of the waters of some rivers as regards the intestinal flora. Who would have believed that the river Rhone kills the typhoid bacillus, that our Seine is inimical to the Shiga bacillus of dysentery, and highly polluted waters, such as the Havre harbour, are fatal to the colon bacillus? The antimicrobic action is more marked after the passage through a town, and bacteriolysis seems to be more of a biological than of a chemical character. If these observations are confirmed they may have a far-reaching influence on practical hygiene. But that the waters of our rivers are not the "purée de microbes" they are reputed to be is well proved by a common experience; I refer to the swimming parties of our boyhood which we enjoyed in the Seine near the Pont de la Concorde, when immunity baffled the severe laws of prophylactic hygiene.

The Government and the Profession.

Underground rumours and many symptoms point towards an impending conflict between the traditional sense of medical independence and the stringent jacobinism of administration. At the Conseil de la Faculté the chair of ophthalmology has not been given to the official candidate of the Government. *Inde ira.* Again, though the Chambre des Députés has voted that a new chair of puericulture should be created, the same Conseil rejected the proposition, pointing out that such teaching was already given by several of our professors. As a matter of fact, the true reason is that our Faculté refuses to be governed by politicians. Now the whole profession is roused by a new bill proposing that we shall keep account books stating the names of our patients with the amount of fees they may have paid us. Our Chamber has failed to understand that such a thing as professional secrecy is at the very base of our dignity and pride. Here we come to a *non possumus*, and tax collectors will have to deal with us in some other way than with the honourable corporation of grocers. After all, we are not so far from the times when Fouquier-Tinville sent some nobleman to the guillotine on the charge of "suspicion of being suspicious."

G. MONOD.

Medical Notes in Parliament.

[FROM OUR PARLIAMENTARY CORRESPONDENT.]

THE introduction of the Nursing Homes Registration Bill, a keen debate on the position of medical referees under the Workmen's Compensation Act, and a second reading debate on the Public Health (Scotland) Amendment Bill have made the past few days in the House of Commons particularly important from the medical standpoint. The estimate for the Ministry of Health in 1925-26 amounts to £19,525,977, against £19,503,771 in 1924-25. The latter figure includes Supplementary Estimates. For the Scottish Board of Health £2,556,885 is asked, against £2,497,842 in 1924-25. The grant for universities and colleges is raised from £1,272,970 in 1924-25 to £1,580,500 in 1925-26.

The Factory and Workshop Acts (Amendment) Bill, which was promised in the King's Speech, has not been introduced yet, and the Government is understood to be reconsidering the proposal in it to transfer certain medical inspection duties from the Ministry of Health to the Home Office. When a similar bill was introduced last year, Dr. Fremantle, on behalf of the Medical Committee of the House, gave notice that he would move its rejection as a protest against this proposed transfer. The Medical Committee will meet again on March 9th to consider whether the Births and Deaths Registration Bill should again be introduced and to debate other medico-political issues.

Bill to Amend the Workmen's Compensation Act: Medical Referees—Nystagmus.

The Workmen's Compensation Bill, introduced by Mr. Cape on behalf of the Labour party, came up for second reading on February 27th, but, after debate, was rejected by 227 to 147. The debate turned largely on medical issues such as the responsibility and impartiality of medical referees, the scheduling of industrial diseases, and the treatment of miner's nystagmus.

A preliminary question was put on February 26th by Mr. T. Williams, who asked the Home Secretary if he was aware that in certain cases the medical referee under the Workmen's Compensation Act had been known to be almost a permanent representative of employers in compensation disputes, and whether he would take steps to ensure that in future all medical referees should be independent both of employers and employees. The Under Secretary for Home Affairs, Mr. Godfrey Locker-Lampson, said he knew of no such cases among medical referees at present appointed under the Act. It was a condition of appointment that a medical referee should hold no personal employment either on the employers' or on the workers' side. Medical referees were enjoined that they should as far as possible avoid cases likely to come before them in their official capacity. It had not been found practicable to impose any further restriction.

Debate.

In moving the second reading, Mr. Cape said that in it the Labour party asked for some of the outstanding disadvantages of the Act of 1923 to be amended. The insurance societies, indemnity societies, and employers' organizations were, he said, now so equipped with a medical service that within a day or two of an accident the employer's medical officer had an opportunity of examining the man, and the chances of malingering were very remote. The Labour party thought the present system put too much on one medical man. Under the present procedure the injured man was first examined by the employer's doctor. He had then to get a report from his own medical man, and very often this was difficult, because as a rule medical men did not take kindly to supplying these reports. All this evidence was submitted to the medical referee, who nearly always lived in the district where the accident happened. The result was that it was difficult to bring in a man who was impartial and not in some way connected with the parties. The referee was only human; he would probably do his best in the examination of the man, but, generally speaking, in the areas where these accidents occurred the medical men were not experts in any particular subject. The examination should be made by three medical men, who should be independent both of the man and the employers so far as the industry was concerned. It was asked also that the referees should not be concerned directly or indirectly in practice in employers' liability or workmen's compensation cases, either on behalf of an employer or a workman, or by an insurer interested in such cases. The Labour party did not ask that this medical board should consist of men whom they approved, but they asked for independence, and that only those of the highest professional standard should be employed on decisions which involved so much to the workers.

Turning to the schedule of the bill, Mr. Cape said that in Cumberland the percentage of cases of miner's nystagmus was high; he met many men who had come out of the mines with nystagmus and were receiving no compensation. The doctors stated that the nystagmus had ceased because oscillation had disappeared from the eye. He drew attention to the appearance, new so far as he knew, of silicosis among miners. Parliament had dealt with that under the Silicosis Act, but the men were at present excluded from the Workmen's Compensation Act. Five deaths had occurred in Somerset and the Radstock district, and other coal-miners were in bad health owing to what the medical authorities declared to be the results of working in stone of a siliceous nature. He knew a coal-miner in Cumberland who had been unable to follow his occupation for fifteen months, and the medical man said this was the direct result of stone dust. The Labour party asked that all these conditions that could be traced as direct results of men following their industrial employments should be included for workmen's compensation.

Mr. Greaves-Lord, in moving the rejection of the bill, said he did not believe in compulsory reference of compensation cases to one referee, and he did not think the position would be improved by increasing the referees to three. It was going too far to say that no medical referee should engage in or be concerned, directly or indirectly, in employers' liability or compensation cases or by insurers interested in such cases, and should not be concerned in private practice in the district. The proposal would deprive referees of any chance of practising in the district of the court, which might be very large. That meant really that the referees would have to be permanent officials of the court. The best system was that which attracted the best class of medical man, and to do that he must have the right to practise, and trust must be put on his honour when appointing him medical referee. The Home Secretary already had power to add diseases to the schedule and modify the conditions of that Order at any time; the Medical Research Council had been considering the matter. There was a great division of opinion among medical men to-day, first as to what miner's nystagmus was, and secondly as to what was the best treatment for it. Dr. Court, who had been connected with the Miners' Federation in Derbyshire for many years, who was known as a man very sympathetic to the workers and as one who had an almost unrivalled experience of miner's nystagmus, held that no compensation should be paid to a man in respect of

nystagmus for more than six months; if compensation were paid longer it was likely to continue the trouble and bring on very serious after-effects.

Sir Henry Slesser said it would not be right to suggest that any accusation or suggestion had been made against the medical profession by the bill's proposal on the medical referees, but there was a feeling among Labour members, with direct experience of the working of the Workmen's Compensation Act, that they would be in a safer position and have a better tribunal if there were three doctors on it instead of one.

Sir Richard Luce, speaking as one who for three years acted as a medical referee, supported the bill. He was not sure that its proposals about referees would be workable in the present form, but he wished to see the question of the referees reopened. Up till now the medical referee had been able to practise in the locality, but had not been supposed to act in a case with which he had come into personal contact. That had not absolutely held good, and in many instances strict enforcement had been extremely difficult. Most medical referees were members of the staffs of hospitals. There they came into contact with many cases of workmen's compensation, the people being their patients, and for this work they received no remuneration, but gave their services as honorary members of the staff. When the medical referee had had to give reports of cases on behalf of the man or of the employer, he had as a rule stood down from being referee. When he had only seen the case as an ordinary physician or surgeon, then he had as a rule been allowed to act. This had brought about considerable difficulties, and he himself had resigned from being medical referee some years ago because he found he was getting mixed between his patients and his duty as a medical referee. While agreeing that some other method of appointing medical referees should be arranged, he foresaw great difficulties, unrealized by the framers of the bill. The value of the appointment as medical referee, even in a large industrial area, was very small. His recollection was that in no year did his remuneration as referee exceed £30. If there were to be whole-time referees under the stringent rules of the bill the working expenses of the Act would be greatly increased. It would, he thought, be difficult to get three whole-time referees for a given case. To do so it would be necessary greatly to enlarge the areas. If there was to be an impartial whole-time man he did not think that three referees would be necessary. It would be better if the schedule were rearranged by the Home Secretary. An alteration should be made in respect of nystagmus. There were many cases which suffered from nystagmus in the early stages—that was to say, from oscillation of the eyeballs. That oscillation passed off, leaving nervous symptoms which caused just as much disability. It was extremely unfair that a man should be deprived of benefit just because he had lost one outward symptom. Many other diseases ought to be added to complete the schedule of the bill, including miner's beat-knee. At present beat-knee and beat-elbow were treated on different terms, though both were caused by constant pressure on hard substances.

Dr. Drummond Shiels said that the Home Secretary had added sixteen diseases to the schedule in twenty years, but they had been recognized for a long time before they were added. Phthisis caused by dust or other irritants which had long been recognized as predisposing causes of the disease should have been on the schedule long ago. The suggestion that if a miner got compensation for nystagmus for more than six months it would considerably aggravate the disease seemed to him in the nature of the new psychology. He feared that the clause of the bill on medical referees was not workable. The Labour party might well consider having three referees—one the man's doctor, one nominated by the employer, and one an outside doctor. There should be a panel of three to obviate groundless dissatisfaction. Very often medical referees were blamed and suspected of bias, owing largely to ignorance on technical points on the part of those affected. He pointed out that in cases of nystagmus it would be impossible to get three eye specialists as a panel, to conform with the conditions of the bill.

Mr. T. Williams said that men who were so far recovered from nystagmus as to have lost the oscillation of the eyeballs were not only deprived of compensation, but were also deprived of their employment. Colliery companies hesitated to re-employ a man who had suffered from nystagmus. In practice the provisions for medical referees did not work out well. It too frequently happened that a man with undoubted medical or surgical skill was constantly found in court taking the side of the employers in compensation disputes. It could almost be said that he was constantly acting as the professional representative of a body of insurers or employers, yet on the morrow they found this representative of employers or insurers acting as referee in a compensation dispute. Without impugning the honesty or devotion of medical men, he submitted that it gave rise to grave dissatisfaction when workmen were called upon to accept as final the decision of a medical referee who was constantly employed and paid by those interested in having these applications rejected.

Mr. G. Locker-Lampson, Under Secretary for Home Affairs, said the Holman Gregory Committee on Workmen's Compensation unanimously rejected the proposed board of three referees because it would be very costly, because the machinery would move more slowly, and because there was no real case for a change, as the referees selected were always medical men of high standing. The ban against medical referees acting in any compensation cases or engaging in private practice in the district would mean the appointment of whole-time practitioners residing in the district, and that would lead to a very heavy extra charge. These practitioners would not get sufficient work unless the areas were grouped into larger districts, and they would lose touch with general practice and gradually become less efficient. He agreed with the Labour party, however, that a close watch ought to be kept over the present situation, and any representations made would be carefully considered by the Home Office. The whole question of medical practitioners could, however, be dealt with by an Order of the Secretary of State, or by regulations, and was not a case for legislation. For these reasons the Government could not accept the medical part of the bill, nor could it accept the proposed additions to the schedule dealing with diseases produced by dust and diseases of the eye. The objection to the inclusion of miner's nystagmus was that it would stereotype the description of the disease and would fix the final terms of compensation; this was inadvisable. A Committee of the Medical Referees Council had sat on this, and had reported that the existing description of miner's nystagmus was already very much too wide; it recommended a stricter standard. The Industrial Diseases Committee had advised against the inclusion of phthisis under the Compensation Act of 1906. But if it was shown that in any employment in any industry the individual employed suffered from the inhalation of silica dust the Home Office could include that employment under the Silicosis Act of 1918. No legislation was required. The Mines Department was looking into the question of silicosis, and if a case was made out that in boring through rock to get at the coal there was inhalation of silica dust, then a silicosis scheme would be made by the Home Office and the people affected would get compensation. [As reported above, the bill was rejected by 227 to 147.]

INSULIN.

The Secretary for Scotland, Sir John Gilmour, on February 25th moved the second reading of the Public Health (Scotland) Amendment Bill, which he said was identical with the bill introduced in the House of Lords by the late Government and read a second time last year. Its purpose was to empower public health authorities in Scotland to provide insulin for sufferers from diabetes who required assistance in obtaining the treatment. Since early in 1924 some local authorities had provided insulin, and the bill was to regularize their position.

Mr. James Stewart, who had been Scottish Under Secretary for Health in the last Government, pointed out that though the bill only provided for the supply of insulin in diabetes, last year's bill proposed that where the Scottish Board of Health considered any other disease required special treatment and an Order were passed by both Houses of Parliament, then the Board would be entitled, without a further Act, to provide for the treatment of these other diseases. As the price of insulin had fallen since last year and doses could now be provided for a few shillings weekly, the necessity of dealing with the one disease of diabetes was not quite so great. He asked the House to consider the possibility of the discovery of an effective treatment for cancer. If the procedure by Order were not adopted deaths might occur while another bill was being passed.

Sir John Gilmour appealed to members to read the bill a second time. He would do everything he could to ensure that insulin was supplied as freely as necessary to those who really required it, but he could not undertake that when the bill was in Grand Committee the extended provisions of last year's bill would be inserted.

Discussion was interrupted by other business, and the second reading of the bill was postponed.

NURSING HOMES REGISTRATION BILL.

The Nursing Homes Registration Bill, presented by Mr. Gerald Hurst, was read a first time in the House of Commons on February 25th. Mr. Hurst had previously explained the provisions of the bill to the Medical Committee of the House of Commons, which, subject to minor amendments suggested by the British Medical Association, had approved it. In introducing the bill Mr. Hurst said that it was uncontroversial and was backed by members from all parts of the House. At present the phrase "nursing home" had no meaning. Any person could call his or her institution, however ill run, a nursing home, however unskilled or untrained the nurses might be and however extortionate the charges. The prevalence of these bogus institutions dragged down the prestige of deserving ones, and their expense was a drain on public resources. The bill provided for the registration and inspection of nursing homes, so that no institution could be carried on as a nursing home by unqualified or unsuitable persons, or where the nursing or domestic staff was ill accommodated, the ventilation bad, or the lighting and warming inadequate. From January 1st, 1930, those having charge of the management must be State registered nurses. Nothing in the bill was intended to preclude anyone unconnected with the nursing profession being registered, but the matron or person in charge must be fully registered. A person refused registration could appeal to the Minister of Health, who could appoint a referee to deal with the complaint. The question of proprietorship was unaffected. Though the bill had been drafted by the College of Nursing, it was not intended to favour any section of nurses, but to help all. The promoters were anxious to meet all interested in the question so that the bill would be regarded as non-controversial. He appealed to the House and the Ministry of Health to help its progress.

The backers of the bill include Dr. Fremantle, chairman of the Medical Committee of the House, and Sir Henry Slesser, ex-Solicitor-General.

In consequence of alterations suggested by the Ministry of Health and by the Medical Committee of the House, the publication of the bill has been postponed for a few days.

Maternity Homes.—The Minister of Health has stated, in reply to a question, that he was not aware of any general complaint that the fees charged in maternity homes were too high, although there

was evidence that in certain cases the fees asked might have deterred some women from entering the homes. He had recently circularized the authorities of grant-aided maternity homes, pointing out that, while women should in general pay what they could reasonably afford, no necessitous woman should be excluded from these homes merely on the ground that she could not contribute a certain sum to the cost of her treatment. On June 30th, 1924, the Minister of Health had issued a circular calling the attention of local authorities to the importance of establishing effective ante-natal clinics and of making adequate provision for the care of women about to become mothers, and to other measures for reducing maternal mortality.

Ministry of Health Staff.—In reply, on February 26th, to Lieut.-Colonel Horlick, Mr. Neville Chamberlain said that the total cost of the medical staff of the Local Government Board, for salaries and for travelling and subsistence expenses, was £30,420 in 1914-15, and in 1918-19, including bonus, £35,743. The medical staff of the Ministry of Health cost £56,985 in 1919-20 and £121,454 in 1923-24, while the estimated cost in 1924-25 was £122,910. The figures for 1923-24 and for 1924-25 included the salaries and expenses of the regional medical officers. Approximately four-fifths of the cost of this last service was recovered out of national health insurance funds. In reply to a further question, Mr. Neville Chamberlain said that three new medical officers had been appointed to fill vacancies. Answering Dr. Graham Little on the same day, Mr. Chamberlain said that in the Ministry of Health one assistant principal had been promoted to the rank of principal since May 1st, 1924.

Pensions Medical Officers.—Colonel Sir Arthur Holbrook, on March 2nd, asked the Minister of Pensions what were the special qualifications, medical or otherwise, of each of four named officers without overseas service, which rendered their retention in the service of the Ministry, in the interests of the pensioner, more desirable than that of the officers with overseas service and in some cases with a war disability whose full-time services were about to be terminated; whether he was aware that one of their number only obtained his medical qualifications in the year 1916 and had practically no experience in the medical practice of his profession since that date, having been employed by the Ministry of Pensions, since he joined the Ministry, on purely administrative duties of a subordinate nature during the past five years; and whether he had been told that he was to succeed an officer with overseas service and a war disability whose services were to be dispensed with, part of whose duties consisted in visiting pensioners at their homes and the holding of medical clinics. Major Tryon, Minister of Pensions, answered that in a reply given to Sir Arthur Holbrook on February 12th he had fully explained the considerations governing the selection of medical officers of the Ministry of Pensions for further employment. It was solely for those considerations that the officers mentioned in the question were being retained. In the reply of February 12th the Minister of Pensions said that the chief considerations determining the continued employment of medical officers in the Ministry were efficiency and the possession of the necessary qualifications for the duties to be performed. Subject to these considerations preference was given to an officer with overseas service, especially if he had a disability.

Poor Law Infirmaries.—On February 25th Major Tasker asked the Minister of Health whether, in view of the existing shortage of available accommodation for the sick in voluntary hospitals, and of the steadily increasing needs of the community, he would issue instructions that everything tending to discourage or limit the use by the sick of Poor Law hospitals or infirmaries be removed, and that disqualifications and disabilities to which patients in voluntary hospitals were not subject should no longer continue. Mr. Neville Chamberlain replied that the question of the best method of utilizing hospital accommodation at present provided under the Poor Law could not be dissociated from the larger question of Poor Law reform. Major Tasker further asked whether steps would be taken to amend Section 46 of the Local Government Act, 1894, to remove the disqualifications to which a guardian or district councillor or a parish councillor became subject when he or his wife or child was admitted as a patient into a Poor Law hospital or infirmary. Mr. Chamberlain replied that pending full consideration of the wider problem in all aspects it would not be desirable to introduce the legislation suggested by Major Tasker.

Panel Doctors and Pensioners.—On February 26th Mr. T. Williams asked the Minister of Pensions whether, before taking away the treatment allowance from a disabled ex-service man, he would consider the advisability of permitting the presence, when the man was examined, of his panel doctor, who in many cases had a closer acquaintance with the man's disability than the medical man who examined him. Major Tryon said he understood that the medical profession was not at all in favour of that proposal.

Institutional Treatment of Tuberculosis.—The Parliamentary Secretary to the Ministry of Health has stated that, as regards England and Wales, the Minister of Health was satisfied with the accommodation provided by local authorities for sufferers from tuberculosis, except that there was need in certain areas for the provision of additional accommodation for cases of non-pulmonary tuberculosis and for cases of advanced pulmonary tuberculosis. The total number of fresh cases of tuberculosis notified during 1923, the last year for which figures were available, was 79,388. On February 1st last 18,427 cases were receiving treatment in institutions in England and Wales, while those recommended for such treatment who had waited more than ten days was 3,436. It might be assumed that most of these cases had now been admitted.

Medical Services in India.—Dr. F. E. Fremantle, on March 2nd, asked when the Government would state its proposals for dealing with the recommendations of the Lee Commission with regard to the medical services in India; and whether the House would be given an opportunity of discussing them before any decision was taken. Earl Winterton, Under Secretary for India, replied that the Secretary of State had not yet received the Government of India's recommendations, though they were expected very shortly. He would prefer to await their receipt before giving any undertaking about discussion.

Defective Children.—The Duchess of Atholl, Parliamentary Secretary to the Ministry of Education, said, in reply to Colonel Day, that the Minister of Education had lately sent local education authorities a circular on the need for augmenting the provision made for defective children. In Manchester 1,370 children were ascertained during 1924 to be mentally defective, in Leeds 296, and in Birmingham 1,220. In Manchester 657 mentally defective children attended school during 1924, in Leeds 279, and in Birmingham 1,186. Children certified as suitable for special schools for the mentally deficient, but now awaiting admission owing to inadequate accommodation, numbered 537 in Manchester and 17 in Birmingham; in Leeds there were none.

Notes in Brief.

The reported occurrence of silicosis among coal-miners is under investigation by the Health Advisory Committee of the Mines Department, which has not yet come to any definite conclusion. Any further action must await the Committee's report.

The Departmental Committee on Workmen's Compensation for Silicosis is inquiring into a scheme of compensation under the Silicosis Acts for the grinding trades, but it is not possible to say when a report would be presented.

The Minister of Health is not prepared to depart from the rule that information relating to insured persons shall not be used otherwise than for the purpose of administering the insurance scheme, save with the consent of the insured themselves.

The Government sees no ground for hoping that a further attempt to secure an international agreement for the disinfection of dangerous wool would meet with success, but the Home Office will continue its efforts in this direction. No new materials will be scheduled for disinfection without due notice to the trades concerned.

The Committee on Food Preservatives is extending its inquiries to include the treatment of flour with chemical substances.

The Home Secretary is looking into the whole question of instruction to the police in ambulance work and first aid.

A survey of the worst elementary schools has been made in the areas of the London County Council, the county boroughs, boroughs, and urban districts of England, and 807 schools out of 5,760 have been mentioned to the authorities concerned as unsuitable in whole or part. A similar survey is in progress in the county areas of England, and the results of the Welsh survey will soon be available.

The number of persons in British India returned as lepers at the census of 1911 was 92,433, and at the 1921 census 85,122. The figures were admittedly unreliable.

In reply to Mr. J. Guest, the Minister of Pensions said that he was not aware of cases of hardship where the failure of ex-service men to apply for pensions under the seven years' limit had been caused by inadequate or mistaken diagnosis by the medical men at an earlier date. If particulars of any such case were supplied it would be considered. Mr. Guest asserted, in a supplementary question, that pensioners had been treated for neurasthenia or debility at various times during the seven-year period, but at the end of that period had been diagnosed as suffering from tuberculosis and had been ruled out. Major Tryon replied that such a case could be considered under the arrangement for the correction of errors which had already been explained.

The average gross cost per inmate in 1923-24 was: in sanatoriums, £136; in county and borough lunatic asylums, £75 10s.; and in Poor Law institutions, £65 10s. The last figure covered all persons in receipt of institutional relief, and not merely sick persons.

The Secretary of State for the Colonies has called on the Governor of the Straits Settlements for a comprehensive report on the high death rate in Singapore, and for a statement of what has been done to improve housing and sanitary conditions since the inquiry held in 1905.

Answering Mr. Robert Morrison, Colonel Stanley, for the Minister of Pensions, said the records of the Ministry did not enable him to supply particulars of the number of appeals, on the ground of tuberculosis, heard by the tribunal during the past two years, nor of the number allowed. Mr. Morrison asserted that many men who had been gassed during the war had since developed tuberculosis of the lungs, but Colonel Stanley replied that that was not under the jurisdiction of the Ministry of Pensions.

Questions relating to the health of merchant seamen are dealt with by the Mercantile Marine Department of the Board of Trade in consultation with the Ministry of Health. The Mercantile Marine Department has a staff of qualified medical officers. The question of modifying the classification of diseases in the statistics of deaths of seamen is under consideration.

Permission has been granted to the Derbyshire and Shropshire education authorities to continue the employment of unqualified dental dressers up to the end of the present year.

Legislation will be necessary to provide that expectant mothers can leave prison for the birth of their children. Extra, or special, diet is provided in prison for all expectant and nursing mothers. Inquiry is being made as to the number of births in prison.

Correspondence.

SIR JAMES MACKENZIE AND THE SYMPATHETIC INNERVATION OF STRIATED MUSCLE.

SIR,—It is probably not an overstatement to say that the recent work on the sympathetic innervation of striated muscle has created a profound revolution in anatomy and physiology.

The new facts contained in the lectures by the late Professor J. I. Hunter, recently delivered by Professor Elliot Smith,[1] afford an entirely new basis from which to approach a great variety of clinical phenomena.

I wish to call attention to one form of muscular activity which has not so far been mentioned, upon which these discoveries throw light, while at the same time they strikingly confirm a view of muscular action which was formulated and expressed by Sir James Mackenzie from purely clinical observation.

The muscular action to which I refer is that shown in what we term the "viscero-motor reflex," in which there is a hardness and rigidity of the muscles of the abdominal wall, or of some portion of them, produced reflexly by certain afferent impulses from the viscera. From repeated observation and consideration of this clinical condition Sir James Mackenzie was led to point out that there are two varieties of muscular action, one the ordinary voluntary contraction, and this other form shown in the "viscero-motor reflex," differing from the first in its nature, since it does not produce shortening of the muscle, it does not as a rule involve the whole extent of a muscle, and it can last for an indefinite time, or, in other words, is not subject to fatigue as is the ordinary contraction. In the fourth edition of his *Symptoms and Their Interpretation* (p. 78) he said:

> "There are different forms of reflex muscular contraction. The cutaneous reflex contraction is accompanied by a sensation; viscero-motor contraction is not necessarily accompanied by a sensation. The cutaneous reflex results in a momentary contraction of the muscle. The contraction of the muscle which arises from the visceral stimulation is persistent. In this persistent contraction of the muscle we get an insight into several processes of a very instructive kind. Light is thrown upon some functions of the sympathetic system at present obscure, and some characteristic features of muscular contraction which have been overlooked are revealed."

There seems to be little doubt that this acute analysis and differentiation corresponds to the activities of the two components of striated muscle, the dual nerve supply, and to the different forms of activity set forth in the lectures by Professor Hunter to which I have referred.

On the basis of Mackenzie's observations it was a justifiable conclusion that striated muscle showed a double form of action, and it is a striking tribute to Mackenzie's accuracy and insight that the structural basis has now been demonstrated for the dual activity which he showed to exist.

It forms, as well, another illustration of the value to anatomy and physiology of such accurate clinical observations, which reveal facts and raise problems which otherwise would be outside the ordinary scope of the anatomist and physiologist.—I am, etc.,

DAVID WATERSTON.

The James Mackenzie Institute for Clinical Research, St. Andrews, Fife, Feb. 28th.

FAMILIAL DIABETES INSIPIDUS.

SIR,—In the report of the last meeting of the Clinical Section of the Royal Society of Medicine in the BRITISH MEDICAL JOURNAL, February 28th (p. 410), Dr. C. F. T. East's case of diabetes insipidus following syphilis is referred to. It is stated that I mentioned a similar case of my own with a remarkable family history. In reality, I alluded to a family series of cases of diabetes insipidus recently described by M. Gänsslen (*Med. Wochenschrift*, Berlin, 1924, iii, p. 22). A healthy woman married to one of the affected males of the family in question suffered from extreme thirst towards the end of her first pregnancy. This disappeared as soon as the child was born, and Gänsslen suggested that the mother's abnormal thirst was due to a diuretic hormone formed by the foetus in her uterus. In fact, her eldest child, after birth, was found to have the familial complaint (paternal side of the family)—namely, diabetes insipidus—whereas the second child was not so affected, and during her pregnancy with the second child she had no excessive thirst and polyuria.—I am, etc.,

London, W.1, Feb. 28th. F. PARKES WEBER.

[1] BRITISH MEDICAL JOURNAL, January 31st, p. 197; February 7th, p. 251; February 14th, p. 298; February 21st, p. 350; February 28th, p. 398.

HEART STRAIN.

SIR,—The suggestion is made in Dr. Pullar's letter (January 31st, p. 238) and in Dr. Brockbank's (February 14th, p. 332) that theoretically the pressure transmitted backwards from the aorta to the left ventricle during diastole would be greater in the case of a small valve leak than in the case of a large one. The theoretical reason given is that the force transmitted through the small area of the small leak would act equally all over the interior of the ventricular wall on areas of the same small size as the valve leak, thereby producing a greater pressure than with a larger leak. With a larger leak the same force would act on larger areas of the wall of the ventricle, giving rise to a less pressure. This supposed effect is likened to that of the Bramah press.

The conclusion seems contrary to common sense, and there is, in fact, a fallacy in the argument. There is confusion of a pressure (force per unit of area) with a force—namely, the pressure in the aorta—with the force acting on the area of the valve leak. This latter force, if the pressure remained constant, would vary directly as the area of the valve leak. The smaller the area of the leak the smaller this force would be, the pressure remaining constant.

There is no analogy whatever with the effect of a Bramah press, as it is obvious that no aortic leak, large or small, could cause the ventricular pressure during diastole to rise above the aortic pressure. The extent of rise in ventricular pressure due to a leak would depend upon the rate of back-flow, the capacity of the ventricle, and the duration of diastole.—I am, etc.,

Bolton, Feb. 22nd. E. S. MILLER.

NERVOUS EXHAUSTION AND LOW BLOOD PRESSURE.

SIR,—I see here many patients from England who have come abroad suffering from "nervous exhaustion." I find that nearly all of them have a blood pressure of 125 mm. Hg or less, and that their improvement coincides invariably, I think, with a rise towards normal of the blood pressure.

Whether this coincidence has ever been remarked before I do not know. I imagine that the exhaustion decreases the tone of the vessels, thus lowering the pressure; and that the fallen pressure emphasizes the exhaustion, and perhaps determines the breakdown. It would be pleasing to understand better this somewhat vague malady.—I am, etc.,

Mentone, Feb. 24th. D. W. SAMWAYS.

TESTS FOR DRUNKENNESS.

SIR,—After many years' experience as police surgeon I must confess that I have never yet met with an absolutely conclusive test for drunkenness. Spinal puncture does not help, and Babinski's reflex only proves chronic alcoholism (and not always that). I have remarked that patience, ordinary common sense, and absolute impartiality favourably impress the judge, whereas a dogmatic attitude and obvious hostility towards opposing counsel are distasteful to him. The police surgeon, I take it, is in the witness-box to assist the court, and the more experience he has had the greater must his authority be, and the judge knows this. In effect, he becomes in time as much of a specialist at his job as the gentleman from Harley Street is at his, and probably more so in this particular connexion. The latter frequently is called upon to rebut the divisional surgeon's evidence, and I suspect for two reasons. For one thing, he by his prestige is expected to rather overawe his colleague who, for the moment, is in opposition, and, in the event of the case being somewhat of a forlorn one, to lend his weight in securing a mitigation of penalty; and for another, there is a possible chance

of his encountering one whose self-confidence is more easily shaken in the witness-box than his own. But, as a rule, the divisional surgeon must score if he speaks the whole truth, sticks to his opinion, and does not allow himself to be browbeaten by any hectoring counsel.

It is quite true that one occasionally hears weird judgements from the bench, and as an instance I am minded of a recent case in which defendant was acquitted of the charge of being intoxicated but was fined for reckless driving. The point lies in the fact that my evidence, dead against the delinquent, had been confirmed in writing by his own doctor who had examined him shortly after I had made my report at the police station.

These things happen, and possibly are designed to suppress unbecoming conceit. Truly the judge has the last word.—I am, etc.,

London, S.W.15, Feb. 27th. ATHELSTANE NOBBS.

RESPIRATORY ORTHOPAEDICS.

SIR,—The work that is done in the ear and throat clinics of the school medical service is lessened in value by the fact that tonsil and adenoid cases after operation often cease to attend after the inspection which satisfies the surgeon that the throat is healed and the naso-pharyngeal tract patent. The operative removal of obstructions in the upper respiratory tract is really no more than the first stage of the necessary treatment. The school clinic surgeon who does not make a special study of the respiratory mechanism of the growing child is but half equipped for his work. The school clinic must in future include in its range not only diseases of the ear, nose, and throat, but all abnormalities of the breathing apparatus as a whole; in other words, it must develop the study of respiratory orthopaedics. There are here important and still undeveloped opportunities for very fruitful research, the cultivation of which will revolutionize school medicine. The mechanism of respiration in the child offers many immediate problems of great practical importance, as for example:

1. The definition of "a normal chest" in the child, as regards (*a*) skeletal structures; (*b*) radioscopic and percussion images; (*c*) auscultation; (*d*) vital capacity; (*e*) pulmonary reflexes.
2. The investigation of the altered respiratory mechanism of the adenoid child, with special reference to abnormal respiratory reflexes.
3. The relation of adenoid hypertrophy to enlargement of the bronchial glands, and the clinical differentiation of such non-infective glandular hypertrophy from early phthisis.
4. The elaboration of a definite system of post-operative respiratory gymnastics based upon a sound conception of the special conditions involved, but simple enough to be of general application. Though we all agree as to the necessity of such exercises, they are not generally provided for, and where such provision is made there is little unity of practice.

The study of respiratory orthopaedics will have to be developed upon systematic lines if the school ear and throat clinic is to be, as it should be, and happily often is, not only a centre for treatment, but for the advancement of knowledge by research, and a fruitful corner in the great field of preventive medicine.—I am, etc.,

F. PEARCE STURM, Ch.M.Aberd.

Ear and Throat Clinic, Leigh, Lancs.
Feb. 19th.

CAUSATION OF CANCER.

SIR,—In an article, "Early pregnancy and epithelioma," in your issue of December 20th, 1924, Dr. Emery emphasizes what he believes to be the protective power of fat against epitheliomatous invasion.

It is true that epithelioma is not infrequently found on sites with little, if any, underlying fat. But it is, I think, very doubtful whether the presence or absence of fat is of any importance etiologically. In 59 cases of epithelioma which we operated upon in 1924, almost without exception all rested upon, or had encroached upon, well marked adipose superficial fascia. These were cases of "kangri-burn cancer," originated by contact with, and irritation caused by, the kangri, a portable earthenware pot containing burning charcoal and held under the clothes against the skin in cold weather by the Kashmiris. Our experience has led us to the very definite conclusion that heat irritation is the primary factor in the production of such epitheliomata, and that they occur at the site of most continued irritation.

Other epitheliomata—as, for instance, those of the lips and tongue, chimney-sweeps', mule-spinners', paraffin and tar workers'—have the element of chronic irritation in common. Recent work on breast cancer in its early stages, with the evidence of irritation and proliferation induced by blocked ducts and acini, points in the same direction. Chorionic epithelioma may probably depend upon the irritative action of some toxic agency associated with pregnancy, the nature of which is not yet demonstrable. While agreeing with the author on the importance of internal and external body hygiene, I think the most important preventive treatment of cancer is undoubtedly the elimination of all possible exciting causes—the protection from sources of irritation.—I am, etc.,

ERNEST F. NEVE, M.D., F.R.C.S.E.

Srinagar, Kashmir, Jan. 20th.

LIME JUICE AND LEMON JUICE FOR PREVENTION OF SCURVY.

SIR,—Neither in Sir Percy Bassett-Smith's letter nor in your editorial comment is there any reference to the experimental work demonstrating the value of potatoes as an antiscorbutic. The Admiralty might well reply to both that an excellent antiscorbutic is carried on board ship in the form of potatoes.

However, in my experience, potatoes as ordinarily prepared have little antiscorbutic value; experimental success may possibly have been due to the animals being fed on unpeeled potatoes containing the "eyes." At a meeting of the War Section of the Royal Society of Medicine on the subject of scurvy the President asked a visitor present for some remarks. The latter had met a famous Arctic explorer and discussed scurvy with him. This explorer had only once been troubled with scurvy amongst his staff. A party had been sent away and came across a depot of tinned food; they threw away fresh meat and ate only tinned food. On return the party were found to have developed scurvy.

My first case of scurvy, a child, was fed on oranges and died. Since then I have seen no case of scurvy that has not been rapidly cured by being fed on raw or undercooked meat. Experiments, however, do not give meat a high antiscorbutic value, the explanation possibly being that the experiments were carried out on vegetable-feeding animals.

The point of my letter is that the scurvy problem has not yet been solved, and more experimental work is necessary in order that theory may explain clinical facts.—I am, etc.,

Southsea, Feb. 23rd. F. C. B. GITTINGS, M.D.Lond.

MINER'S NYSTAGMUS.

SIR,—In your account of the discussion on miner's nystagmus in your issue of February 21st (p. 362) I am reported as saying, "The cases should be treated for the neurasthenia, and it would disappear and with it the nystagmus."

To one who is familiar with the difficulties of even investigating such disorders, and with the complicated nature of the problems of prevention and treatment, a statement like that appears to be pernicious nonsense. My speech, prepared beforehand and read verbatim, contained nothing to which such an interpretation could be given. Indeed, I specifically indicated the alarming complexities that the psycho-pathological view introduced, though I expressed the belief that we should ultimately be compelled to accept it.

May I disclaim, too, the use of the word "neurasthenia," which is now almost void of clinical meaning.—I am, etc.,

London, Feb. 27th. MILLAIS CULPIN.

THE HYPOTONIC (FLABBY) CHILD.

SIR,—What the flabby child needs is open air and sunshine treatment as applied to cases of surgical tuberculosis. The results of treatment of such children with white-flame carbon arc baths are very good. The baths are given two or three times a week, exposing for five, increasing to fifteen minutes, first the front and then the back of the body at a yard distance, using a lamp taking 30 ampères and 100 volts, or the equivalent wattage.—I am, etc.,

Loughton, March 1st. LEONARD HILL.

TUBERCULIN TREATMENT.

SIR,—I am one of those doctors who watched and learnt Dr. Camac Wilkinson's method of treating tuberculosis with bi-weekly injections of tuberculin from 1910 onwards, and have myself followed out his teaching carefully with very many good results.

From London dispensary work begun early in 1911, and in sanatoriums at Rudgwick, Fritton, and Ockley, we got uniformly good results; and now, in 1925, I have been told evidence exists of 50 per cent. of the tuberculin-treated patients being alive ten years after cessation of treatment, while as control cases only 5 per cent. of the patients who were not so treated were alive, all being cases with tubercle bacilli.

Only yesterday a small but important meeting was held in Central London to suggest opening again tuberculin dispensaries. At least eight doctors were present, possibly more. At that meeting it was emphasized that any medical staff should be paid, as it is highly technical work, requiring skill and care, and must be learnt. But it is work which only requires a couple of hours twice a week regularly, and it is of the greatest possible interest.

Those of us who have worked at it for years believe in it; and it is only those who do not wait for results who reject it. In my opinion there are a large number of untouched cases of early tuberculosis who might be entirely saved from disaster by six months' treatment at very little expense and without the patient losing a day's work. Late cases, too, are frequently much benefited, and in any case the expectoration is minimized and so they become converted into comparatively harmless cases.

My object in writing is to say I will give all the help I can to any doctor who is anxious to see or learn at *37, Jeffreys Road, Clapham Road, S.W.*, every Tuesday and Friday from 9 to 10 a.m.—I am, etc.,

ANNIE MCCALL,
Director, Clapham Maternity.

London, S.W.9, Feb. 28th.

Obituary.

GEORGE SIGERSON, M.D., F.R.C.P.I., M.R.I.A.

WE regret to announce the death of Dr. George Sigerson, which took place at his residence in Dublin on February 18th. He was born at Strabane, co. Tyrone, some ninety years ago, but the exact date of his birth is not known; a younger fellow student of Dr. Sigerson at Queen's College, Cork, where he greatly distinguished himself, estimated his age in October, 1921, as being between 85 and 90 years, and added that in his early manhood Sigerson, a very keen student of Irish, published a translation of the Munster Gaelic poets. On graduating at the Queen's University, Sigerson visited Dublin and went also to Paris, where he pursued his medical studies, devoting special attention to diseases of the nervous system. He took the degrees of M.D., M.Ch., and at a comparatively early age became professor of botany, and later of biology, in the Catholic University Medical School, Dublin. As a scholar and writer he won golden opinions from all sorts of people, and his personal charm was such that he was beloved by the students, who held him in the greatest respect and reverence. When the Royal University of Ireland was founded Sigerson took his place in it, adding steadily to his reputation both in science and literature. Under his aegis the National Literary Society was established in Dublin, and as its president during a long term of years he conferred dignity and distinction upon its discussions. Some seven or eight years ago the members of the society marked their appreciation of his services by presenting him with a portrait of himself by Sir John Lavery, the eminent Irish artist, and many members secured engravings of the portrait. Within recent years the Royal College of Surgeons marked the esteem in which Dr. Sigerson was held in his profession by making him an Honorary Fellow. He was the author of several scientific papers which were presented to the Royal Irish Academy, and published in its *Transactions*. His eminence as a medical man was acknowledged widely, and he was well known as a litterateur and a man of science. To the end he enjoyed a large and lucrative practice as a neurologist in Dublin. Among Dr. Sigerson's scientific publications were *Microscopical Researches on the Atmosphere*; *Heat as a Factor in (so-called) Vital Action*; *Cause of Buoyancy of Bodies of Greater Density than Water*; *Additions to the Flora of the Tenth Botanical District*; *Relationship of the Inflorescences*; and a translation, with notes, of Professor Charcot's lectures on diseases of the nervous system. Since its foundation, Dr. Sigerson had been a Senator of the National University of Ireland. He was a corresponding member of several of the leading literary and scientific societies in Paris. He was married, and had one son and three daughters; one of the latter—the late Dora Sigerson Shorter—won some distinction as a writer of verse. In many of his public lectures and addresses Dr. Sigerson referred to his descent from the Norsemen, and seemed to take particular pride in it. His massive figure, flowing locks, and long flaxen beard were picturesque corroborations of his claim. In his writings are many allusions to the settlement of the Norsemen in ancient Ireland, as, for example:

"The Norsemen were no newcomers in the ninth century. Gaelic writers state that the fair race of the Tuata de Danaaus came to Erinn from Norway where they had settled. If we consider them as early Norse—which I think probable—these were in constant touch with the island before and after the coming of the Southern Milesians. The annals of Ireland recall several intermarriages in ancient times. Thus, in the second century, King Tuatal the Legitimate married a Norse Princess. King Cormac MacAart, in the third century, the first Christian king, was grandson of a Norse woman. There were two Norse ancestresses in the lineage of Ossian, the last great Pagan Bard—whilst Secundinus, the first Irish hymn-writer in Erinn, was the son of one of the Longobards, who are supposed to have then recently left Norway."

Among Dr. Sigerson's attainments it is probable that the majority of his countrymen would give pride of place to his work as an authority on the ancient Gaelic poetry of Ireland. As a young man he was a great friend of the late Dr. Sullivan, President of Queen's College, Cork, and it is more than likely that he met O'Curry, who died in Dublin in 1862. In his explorations in the highways and byways of Gaelic poetry Sigerson brought into play the vast resources of his learning and his intellectual gifts, while his qualities of sympathy and understanding were enlivened by his delicate literary style, which lent a charm to everything he wrote. As a lecturer upon those literary subjects that were so dear to him he inspired his hearers with a feeling, not only of reverence, but of affection. Sigerson surrendered himself entirely to the charm of the music and poetry that captivated the poet Spenser—with this difference, that while the author of the *Faerie Queene* looked upon Elizabethan Ireland as a stranger looks upon a conquered land, and used the Gaelic gems that he picked up for the adornment of English literature, Sigerson looked upon the English colonial element in his country at the present day as destined to be peacefully absorbed in the revival of a Gaelic Ireland. Upon this point he wrote, in his preface to *The Last Independent Parliament of Ireland*:

"Since the first dividing pale there has manifestly been, in Ireland, a great vital fusing force, which irresistibly attracted all later comers into the nation. Age after age, a palisade of rigid laws was set up, like a stockade, hideous with horrid penalties, like spiked skulls; and age after age that great vital Irish fusing force has broken down and swept away every penal pale, and changed foes into friends."

Sigerson delved in neglected literature of a period "where long forgotten peoples lived, loved, and acted," and it was his regret that, unhappily for history, that literature was long buried in neglect—"locked in an archaic language, like some splendid missal claspt in covers of wrought silver, which could not be opened." Of the Irish literature before the Christian era he says that "it is, indeed, one of the highest honours of Irish monasticism that, though ascetic and zealous in the extreme, it had a liberal, large-minded respect for the literature of the ancients, and preserved it." In his introduction to his second edition of *Bards of the Gael and Gaul* he rejoices that Ireland is the sole representative of that great world which lived and thrived outside the classic camp. The early poems, in which there is no trace of Christian

influence, are quoted as evidence that "when St. Patrick came to Ireland he came, as St. Paul to Athens, before a highly cultured audience."

RICHARD WILLIAMS, J.P., M.R.C.S., L.R.C.P.ED.,

Consulting Surgeon, Eye and Ear Infirmary, Liverpool.

IT is with regret we have to announce the death from influenza, on February 20th, of Mr. Richard Williams, in his 80th year. He was born in Anglesey and began the study of medicine in Glasgow; he took the diplomas of L.R.C.P.Ed. and L.R.F.P.S. in 1870, and that of M.R.C.S. in 1871. After a period of general practice he devoted special attention to diseases of the eye, and spent some time in London and in Paris. He was appointed assistant surgeon to the Liverpool Eye and Ear Infirmary, and afterwards became full surgeon, a post he held for thirty-seven years. He was also ophthalmic and oral surgeon to the Royal Albert Edward Infirmary, Wigan. To the Liverpool Medical Institution he made several important communications on various diseases of the eye. Being a skilful operator and with plenty of initiative he introduced new methods of treatment—for example, the actual cautery in conical cornea, a method of muscle advancement by a single circular stitch, usually done in seven to eight minutes under cocaine with excellent results. In plastic operations on the lids and conjunctiva Mr. Williams showed great skill and ingenuity. Much of this work was known only to his colleagues, as he was diffident in publishing his methods and averse to any appearance of self-advertisement. He was a vice-president of the Liverpool Medical Institution and also vice-president of the Ophthalmological Society. Mr. Williams was the first ophthalmic surgeon to conduct the eye department of the Royal Southern Hospital. He was made a justice of the peace of the city of Liverpool. In 1910 he retired from practice in Liverpool, owing to reasons of health, and resided in Bangor, where he continued to practise his specialty till the end of last year. His professional ability was recognized by his being made a President of the North Wales Branch of the British Medical Association, and his services were frequently claimed by the Carnarvonshire and Anglesey Infirmary in Bangor.

Mr. Richard Williams was a man of strong convictions, sincere and courageous. Passionately fond of his native country, he was a great advocate of nationalism, and a strong individualist. He possessed humour, albeit at times a little sensitive when made at his expense. He was fond of languages and well acquainted with French and Spanish. His breezy, emphatic personality will be missed by many friends. The loss of his elder son, while flying in the war, was a great blow to him. Mr. Williams was buried in Glanadda in the presence of friends and former colleagues. He leaves a widow, who tended him devotedly, and one son; to them we desire to tender our sympathy.

E. MACDOWEL COSGRAVE, M.D.,

Formerly President of the Royal College of Physicians of Ireland.

DR. E. MACDOWEL COSGRAVE, who died at his residence in Dublin on February 17th, was in his 78th year, and was a prominent figure in the professional and social life of Dublin. His educational and professional attainments gained him many distinctions, while his charming personality and his generous disposition won him many friends. He was the son of William Alexander Cosgrave, clerk of the peace for County Longford, and Anna Maria, daughter of Surgeon Ephraim MacDowel, of the Richmond Hospital. He received his earlier education at Kingstown School, and later entered Trinity College, Dublin. He studied at the House of Industry and the Rotunda Hospital, and took the degrees of B.Ch. and M.Ch. (*stipendiis condonatis*) in 1870 and that of M.D. in 1878. He became a Fellow of the Royal College of Physicians of Ireland in 1880, and was President in 1914. Dr. Cosgrave was physician to Simpson's Hospital, Drumcondra Hospital, and Cork Street Fever Hospital, and during the great war was physician to the Dublin Castle Red Cross Hospital. He was also physician-in-ordinary to the Lord Lieutenant of Ireland. He was professor of biology in the Royal College of Surgeons, a member of the British Medical Association, and honorary member of the Dublin Council of the Biological and Experimental Science Association. He was also a knight and honorary associate of the Order of St. John of Jerusalem. Dr. Cosgrave was the author of many books, including *The Student's Botany* (1885), and several contributions to journals, chiefly relating to hygiene. He was lecturer in zoology and botany in the Royal College of Surgeons in Ireland. He was the author of the official handbook of the St. John Ambulance Association—a book of which more than four hundred thousand copies have been sold. Apart from his professional attainments, Dr. Cosgrave was a well known antiquary and archaeologist, and was widely recognized as an authority on the history of Dublin and its institutions. He knew his native city as it was given to few to know it. He was one of the principal founders of the Georgian Society, to which body he acted as honorary secretary. He was also a member of the Royal Society of Antiquaries, and his writings on antiquarian subjects were many and well informed. He was the author of *The Illustrated Dictionary of Dublin* (1895, second edition 1906), of a catalogue of engravings of Dublin from the earliest times to 1900, and of *Dublin and County Dublin in the Twentieth Century*, all of which are standard works. In addition to such activities, Dr. Cosgrave found time to devote to photography and chess, which were among his favourite recreations. He was president of the Amateur Photographic Society and was an expert with the camera, some of his photographs being works of art. He was also president of the Irish Chess Club, and was the first to play the game with living men as pieces. In these pursuits Dr. Cosgrave's genial personality won him friends in all directions.

THE LATE SIR CLIFFORD ALLBUTT.

WE are indebted to Sir CHARLES SCOTT SHERRINGTON, G.B.E., M.D., President of the Royal Society, for the following appreciation:

The invitation to offer my brief tribute to the memory of Sir Clifford Allbutt brings home the difficulty, despite the knowledge of his advanced age, in realizing that he is no longer among us; his vitality overflowed like an influence on all about him. Few, of whatever career, can have combined attainments and a distinction of personality and of person such as met in him. Of many and wide interests, some of them seemingly little compatible, such as scholarship and public professional service, these were in him united into the one harmonious outstanding figure admired of us all. The force unifying him was surely pre-eminently the love of his profession—a love which as exemplified in him implied devotion to its highest causes, the upholding of its learning, the cultivation of its best tradition, the organizing of its power for beneficence. Literary expression was among his gifts. The wide audience which his medical writings reached knows this well. And his letters on public matters appearing from time to time were to a yet larger audience always welcome, and not only for their matter but for their manner as well. Moreover, personal letters from him, written much as he would have spoken, had a characteristic charm and freshness and point, humour and picturesqueness, streaming in swift profusion through them from outset to end. One pauses at the sadness that there can be no more of them to come.

The FINANCIAL SECRETARY of the British Medical Association writes to supplement our record in last week's issue of Sir Clifford Allbutt's many services to the Association. In the seventies Dr. Allbutt (as he then was) held an official position upon the old Committee of Council; he was one of the elected twenty members for a seat on the 1875-76 Council, and attended for the first time the Committee of Council held on August 1st, 1876, at Sheffield under the presidency of Dr. Wilbraham Falconer, another of the old pillars of the Association, who was contemporary with the founder, Sir Charles Hastings, and who held the offices of President of Council and Treasurer from 1870 to 1878.

Dr. NAUNTON WINGFIELD DAVIES of Creigiau, Cardiff, died on February 13th. He was born at Newport, Mon., in 1852, the eldest son of Dr. David William Davies of Llantrisant, whose mother was a lineal descendant of Sir Robert Naunton of Lethringham Abbey, near Wickham Market, Secretary of State to James I. He was educated for the medical profession at the Royal College of Surgeons in Ireland and at Edinburgh; he took the diplomas of L.R.C.P.Ed. in 1876 and F.R.C.S.Ed. in 1891, and was gold and silver medallist. In 1881 he commenced practice at Bridgend, where he continued his professional work till 1897, in which year he forsook medicine for literature. He was the author of *A Day with Hounds and What Came of It*, which had a large sale. In 1898 he wrote *The Secret of a Hollow Tree* and *Chester Cresswell*, both of which received high commendation. He also contributed articles on professional subjects to various journals, and some on hunting and fishing to *Land and Water*. He subsequently took up the practice of medicine again, and in 1902 wrote *The King's Guide*, which was considered his most successful romance. He is survived by three sons and a daughter. His widow contracted pneumonia on the day after his death and died on the following day.

Dr. REGINALD ARTHUR MORRELL died suddenly, on February 19th, at the age of 42, while examining some *x*-ray plates at the Sheffield Royal Hospital. He received his medical education at St. Thomas's Hospital Medical School, and took the English Conjoint Board diplomas in 1908. He was honorary radiologist to the Sheffield Royal Hospital, the City of Sheffield King Edward VII Memorial Hospital, and to the Chesterfield and North Derbyshire Royal Hospital, as well as lecturer in radiology in the University of Sheffield. He was a Fellow of the Royal Society of Medicine, a member of the Oxford Ophthalmological Congress, and of the Sheffield Division of the British Medical Association. During the war Dr. Morrell had served with the rank of captain in the R.A.M.C., and was radiologist to the 3rd Southern General Hospital. After the war he became radiologist to the Headington Orthopaedic Hospital under the Ministry of Pensions, and, later, clinical assistant in the *x*-ray department at the Radcliffe Infirmary, Oxford. He was the author of a paper on the after-effects of certain industrial injuries and their treatment by *x* rays, published in our columns in 1923.

Dr. FRANK D. M. BEATON died at his residence in Leeds on February 2nd. He was a native of Glasgow and went to the High School there, and began the study of medicine at Edinburgh University in 1914. Soon after the outbreak of war he joined the Argyll and Sutherland Highlanders, from which regiment he transferred to the Special Branch of the Royal Engineers, and saw active service in France for over three years. After the armistice he resumed his medical studies, and graduated in July, 1922. In the following year he was appointed resident medical officer to the Edinburgh City Hospital, and took the D.P.H. He had been in practice in Leeds for twelve months, where his skill and kindliness of heart had endeared him to colleagues and patients alike. A promising career has been tragically ended by a sudden onset of septicaemia following tonsillitis.

Dr. WILBERFORCE J. J. ARNOLD, colonial surgeon and acting Governor of St. Helena, died on that island on January 29th. He was educated at Belfast, where he graduated B.A. with honours in 1887, and M.B., Ch.B., and B.A.O. in 1894; he took the D.P.H.Oxford in 1913. He served as a civil surgeon in South Africa and in St. Helena during the South African war, 1900-02, and in 1903 was appointed colonial surgeon at St. Helena. He was a member of the executive council, and had twice previously acted as Governor. The late Governor, Colonel Peel, died at St. Helena in August last, while Mr. C. H. Harper, C.M.G., who was appointed to be Governor in December, has not yet arrived. In the meantime the officer commanding the garrison has been appointed to act as Governor. So the colony will have had four Governors in half a year.

We regret to announce the death, in his 58th year, of Dr. GEORGE PETERKIN of Forfar, which took place at a nursing home on January 28th. An Englishman by birth, he went as a boy to reside with his parents in the North of Scotland, where his father was an extensive breeder of shorthorn cattle at Dunglass, Ross-shire. He was educated at the University of Edinburgh and the Royal College of Surgeons, Edinburgh, and graduated M.B., C.M.Ed. in 1892 and M.D. in 1900; he took the D.P.H. of the Conjoint Board in Scotland in 1897. After acting as an assistant at Hawick, he went, about thirty years ago, to Forfar, where he succeeded Dr. Hunter. He subsequently became M.O.H. for the burgh of Forfar, medical officer to the Forfar Parish Council, surgeon to the Forfar Infirmary and to the police, and certifying factory surgeon. He was an ex-president of the Forfarshire Medical Society and of the Dundee Branch of the British Medical Association. Dr. Peterkin is survived by a daughter and two sons.

Dr. GEORGE SYMERS MILL of Ossett, who died on January 30th, aged 59, was a native of Scotland, and received his medical education at the University and Royal College of Surgeons of Edinburgh. He graduated M.B., C.M. in 1889, and took the M.D. in 1897. He went to Ossett over thirty years ago as assistant to Dr. J. G. Wiseman, and on the latter's retirement succeeded to the practice. He was for twenty-six years one of the honorary surgeons on the staff of the Dewsbury and District General Infirmary, and also held the appointments of certifying factory surgeon and medical officer to the post office. Last month he resigned the post of medical inspector of school children at Ossett. He took great interest in ambulance work and for many years conducted classes in connexion with the local branch of the St. John Ambulance Association. On the outbreak of war in 1914 he, as a major of the R.A.M.C.(T.), was sent to France, where he remained till November, 1915, when he was invalided home; he subsequently did duty at the Military Hospital at Dewsbury. Dr. Mill, who was a member of the Dewsbury Division of the British Medical Association, is survived by an only daughter.

Dr. JEAN CROCQ, professor of psychiatry at Ghent, and founder of the *Journal de Neurologie* and of the Belgian Société de Neurologie, has recently died at the age of 56.

Dr. MAURICE DEMENITROUX, the distinguished pupil of M. and Mme Curie, has recently died of progressive anaemia. Shortly before his death he was engaged in the preparation of the salts of thorium.

The Services.

DEATHS IN THE SERVICES.

Colonel Robert Isaac Dalby Hackett, C.B.E., Army Medical Staff (ret.), died at Cheltenham on February 15th. He was born on March 31st, 1857, and educated at the Carmichael School in Dublin and at Queen's College, Galway, where he graduated B.A. with first class honours and gold medal in 1877, and M.A., M.D. with honours, and M.Ch. of the Royal University, Ireland, in 1880. He entered the army as surgeon on July 30th, 1881; he reached the rank of full colonel in 1911, and retired in the following year. He served in the Sudan campaign of 1885 at Suakin, and also in the action at Haskin and advance on Tamai, receiving the medal with a clasp and the Khedive's bronze star. He served also in operations in Zululand in 1888. In the South African war of 1900-2 he was principal medical officer of a general hospital, and took part in the relief of Ladysmith, and in operations in Natal and in Cape Colony, gaining the Queen's medal with one clasp and the King's medal with two clasps. He was re-employed during the recent war and received the C.B.E.

Lieut.-Colonel John Martin, R.A.M.C.(ret.), died at Southsea on January 28th, aged 77. He was born at Cork and educated at Queen's College there. He took the L.A.H.Dubl. in 1870, and the L.R.C.S.Ed. in 1872. He entered the army as surgeon in March, 1874, reached the rank of brigade surgeon lieutenant-colonel in 1897, and retired on June 26th, 1902. After his retirement he was employed for some time at Londonderry. He served abroad in Egypt, India, and Burma for seventeen years, and after his return home was for three years in charge of the Cambridge Hospital at Aldershot. He served in the Egyptian war of 1882, when he was present at the battle of Tel-el-Kebir, and received

the Egyptian medal and the Khedive's bronze star; in the campaigns in Burma in 1886-87 he was personal assistant to the surgeon-general, and gained the frontier medal with a clasp. He had a literary bent throughout his career. Twice he gained the Alexander Memorial gold medal, in 1879 and 1885; and he was also the author of two volumes entitled *Contributions to Military and State Medicine*; he also won the Howard medal of the Royal Statistical Society of London. After his retirement he published a volume of poetry in blank verse, *A Legend of the Severn, an Idyll of Ancient Britain*. He was also interested in Freemasonry, and took a prominent part in the foundation of a lodge in Burma, of which he was the first worshipful master. He was twice married, and leaves a widow, a daughter, and two sons, both in the medical profession.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

At a congregation held on February 28th the following medical degrees were conferred:

M.D.—J. H. Burn.
M.B.—A. C. Mowle.

Drs. G. Forssell and R. Knox have been approved for the diploma in medical radiology and electrology.

UNIVERSITY OF LONDON.

Dr. J. H. Dible has been appointed, as from April 1st, 1925, to the University Chair of Pathology at the London School of Medicine for Women.

The title of Emeritus Professor of Medicine at University College has been conferred upon Sir John Rose Bradford, K.C.M.G., C.B., C.B.E., F.R.S., who occupied at University College the Chair of Materia Medica, Pharmacology, and Therapeutics from 1895 to 1903 and the Chair of Medicine and Clinical Medicine from 1899 to 1907.

Professor H. R. Kenwood, C.M.G., who held the Chadwick Chair of Hygiene at University College from 1904 to 1924, has been appointed Emeritus Professor of Hygiene in the University.

The School of Pharmacy of the Pharmaceutical Society of Great Britain has been admitted, for pharmacy only, as a school of the University in the Faculty of Medicine for five years from January 1st, 1925.

The degree of D.Sc. in Biochemistry has been conferred upon Mr. R. Robison, an internal student of the Lister Institute of Preventive Medicine, for a thesis on hexosephosphoric esters and their physiological functions.

Dr. E. Barclay-Smith, Professor of Anatomy at King's College since 1915, and Sir John Charlton Briscoe, physician to King's College Hospital, have been appointed Fellows of King's College.

A course of lectures on medical hydrology, arranged by the University Extension Board in co-operation with the Committee for the Study of Medical Hydrology, will be given at the central buildings of the University from April 27th to May 2nd, 1925. The lectures will be supplemented by demonstrations and clinical lectures at a British spa.

Matriculation.

At the January matriculation examination of the University of London 100 candidates passed in the first division and 758 in the second division, while 60 took the supplementary certificate in Latin.

UNIVERSITY COLLEGE.

Annual Report.

During the session 1923-24 the total number of students enrolled was 2,335. Of these 2,285 were taking day courses, 329 evening courses, and 158 vacation courses. The day course students included 513 post-graduate and research workers. Of the total, 2,317 students came from homes in the United Kingdom; 214, including 74 post-graduate and research, came from various parts of the Empire. From European countries there were 177 students: Switzerland 35, France 27, Holland and Russia each 22, Denmark and Germany each 9, Norway and Sweden each 6; 43 students came from the United States of America (17 undergraduate, 24 research, and 2 vacation course). From other countries the largest number—36—came from Japan; of these 8 were doing research work. There were 1,696 registered internal students in various stages of degree courses. Of these, 305 passed examinations leading to degrees; 274 obtained degrees (215 bachelor degrees, 154 with honours); 59 higher degrees (40 masters, 10 Ph.D., and 9 doctors).

The financial statement shows on the maintenance account a total expenditure of £176,994 and income of £168,943, leaving a deficit of £8,051, mainly accounted for by the very heavy expenses incurred in the maintenance of the new buildings and in rates on these buildings. It is also partly accounted for in the slight decline in the number of students in the professional faculties in which fluctuation takes place from time to time, according to the financial position prevailing in the country. Steps are being taken to prevent a recurrence of the deficit, and hope is expressed that the University Grants Committee may be able to increase its grant in view of the large donations received by the college through the Rockefeller Trust and other bodies for the erection and equipment of the new buildings.

The two halls of residence for the college have been full throughout the session, and it is clear that at an early date an extension of accommodation for resident students will become essential.

Medical News.

THE Fellowship of Medicine announces that there will be a discussion on post-graduate teaching in London at No. 1, Wimpole Street, on March 18th, at 6 p.m. Sir Arbuthnot Lane will preside, and members of the medical profession are invited to be present and give criticisms of the existing Fellowship arrangements and suggestions for their improvement. On March 11th Mr. Oswald Addison will lecture on cleft palate at No. 1, Wimpole Street, at 5.30 p.m. From March 9th to April 4th there will be an afternoon course in ophthalmology at the Central London Ophthalmic Hospital. At the Chelsea Hospital for Women a two weeks' course in gynaecology is to be held from March 16th to 27th, and during the same period a course in chest diseases will be conducted at the Brompton Hospital, including demonstrations of cases, *x*-ray work, and protein tests. The Royal Northern Hospital, in conjunction with the Royal Chest Hospital, will give an intensive course in medicine, surgery, and the special departments, from March 16th to April 4th. The lectures and demonstrations at 4.30 p.m. each day are free to the medical profession. During April there will be courses in diseases of children at the Queen's Hospital, in proctology at St. Mark's Hospital, and an intensive course at the Hampstead General Hospital. A special course in anaesthetics will be arranged for an entry of four post-graduates, and early application is requested. The syllabus of these courses can be obtained from the Secretary to the Fellowship, No. 1, Wimpole Street, W.1.

THE seventeenth international post-graduate course at Vienna from June 15th to 27th will deal with modern therapeutics, including hydrotherapy, diathermy, serum therapy, and various specialties. The course will be followed by practical and clinical work in various hospitals from June 30th to July 4th. Tickets for the course may be obtained from Professor Dr. Richard Wasicky, Bureau der Wiener Ärztekurse, Schlösselgasse, 22, Wien viii. Presentation of these tickets at the Austrian Legation in Belgrave Square, London, will enable a reduction of 50 per cent. on the visa (6s.) to be obtained, and also a tariff of the various Vienna pensions, hotels, and restaurants.

WE published on February 21st (p. 391) a note about hexyl resorcinol, and in the *Epitome* this week (para. 240) an abstract appears of Dr. Veader Leonard's paper in the *Journal of Urology*, December, 1924. We are now informed by the British Drug Houses, Ltd., that they have prepared some hexyl resorcinol in their laboratories, and, while feeling it premature to offer it for sale without further evidence as to its clinical value, they are willing to supply limited quantities to any medical practitioner who would care to make trial of this preparation in the treatment of infections of the genito-urinary tract.

DR. J. A. HARRIS on his resignation of the post of medical officer of health for Chorley has been presented by the members and officials of the Rural District Council with his portrait painted in oils by Mr. F. E. Jackson. In making the presentation Colonel W. Ince Anderton referred to the tact and courtesy displayed by Dr. Harris during the forty-nine years he had served as medical officer.

AT the annual dinner of the Hospital Saturday Fund on February 28th it was announced that the total income from all sources for the past year had reached £107,386, showing an increase of £6,143 over the previous year; the management expenses were 8 per cent.

THE Minister of Health announces (Circular 567, dated February 27th, 1925) that the review of civil service bonus on March 1st, 1925, is based on an average cost of living figure of 80—that is, on the same basis as obtained on March 1st, 1924.

DR. DAVID A. VOLUME has been appointed by the King to be an official member of the Executive Council of the Presidency of the Virgin Islands.

THE late Mr. James M. G. Prophit of Glenluce, Wigtownshire, and London, left estate of the gross value of £219,793, with net personalty £213,735. The residue of his property he left to his sister for life, and at her death the residuary estate is to be made a trust fund, of which one-half is to be applied for inquiry into the nature, cause, prevention, treatment, and cure of tuberculosis, and one-half for a similar inquiry regarding cancer as a board of special trustees, which is to include the President of the Royal College of Surgeons of England, shall decide. The trustees may apply the funds of the trust in financing persons or institutions conducting such research, the equipment and endowment of institutions or laboratories for this purpose, and the publication of the results of such researches. After payment of duties it is anticipated that the value of the bequest will be about £160,000 net.

DR. JOHN FRASER, surgeon to the Royal Hospital for Sick Children, Edinburgh, and assistant surgeon to the Royal Infirmary, has been appointed Regius Professor of Clinical Surgery in the University of Edinburgh, in succession to Sir Harold Stiles.

THE committee of the Athenaeum, under Rule II (which empowers the annual election of certain persons of distinguished eminence in science, literature, arts, or for public service), has elected into the club Lieutenant-General Sir W. B. Leishman, K.C.B., K.C.M.G., F.R.S., Director-General Army Medical Service.

A DENTAL travelling scholarship of the value of £250 will be awarded by the treasurer of Guy's Hospital Dental School, upon the recommendation of the Dental Council, next July. Applications must be received by July 1st. Candidates must have been educated at Guy's Hospital Dental School, and will be required to engage in at least six months' practical work at an approved colonial or foreign dental school or college. Further particulars will be found in our advertisement columns.

DR. PAUL DELBET, whose death we announced in the JOURNAL of January 31st, was stated to be surgeon to the Necker Hospital. This was an error; his cousin Pierre holds that position.

THE annual general meeting of the National Baby Week Council was held at 117, Piccadilly, on March 4th, with Sir Arthur Newsholme in the chair. After the chairman's address the certificates of merit won in connexion with the Astor Challenge Shield competition, 1924, were presented. The report of the Executive Committee was adopted on the motion of its chairman, Dr. Eric Pritchard. After the transaction of other business an address on "The formation of character, a problem of child psychology" was given by Dr. J. A. Hadfield, lecturer in psychology, King's College, London.

IN the *Bulletin* for 1924 of the Ophthalmological Society of Egypt a detailed account is given of the annual meeting of the society held in March, 1924, including a paper on glaucoma contributed by Professor E. Fuchs of Vienna. The laboratory at Giza, Cairo, has now been completed and placed under the joint control of the Egyptian Government and the British Commissioner in Egypt. Research work is proposed in connexion with trachoma and other forms of ophthalmia in Egypt, and in our issue of February 21st applications were invited for the posts of director and pathologist. It is hoped that one of the main features of the laboratory will be its use as a centre of ophthalmological teaching in Egypt.

Letters, Notes, and Answers.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—not necessarily for publication.

Communications intended for the current issue should be posted so as to arrive by the first post on Monday or at latest be received not later than Tuesday morning.

THE telephone number of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is Gerrard 2630 (Internal Exchange). The telegraphic addresses are:

EDITOR of the BRITISH MEDICAL JOURNAL, *Aitiology Westrand, London.*

FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate Westrand, London.*

MEDICAL SECRETARY, *Mediocre Westrand, London.*

The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin (telegrams: *Bacillus, Dublin*; telephone: 4737 Dublin), and of the Scottish Office, 6, Rutland Square, Edinburgh (telegrams: *Associate, Edinburgh*; telephone: 4361 Central).

QUERIES AND ANSWERS.

"H. F.," a medical man suffering from tuberculosis (very slight case), desires to be admitted to a sanatorium, and would be willing to do some professional work as a return.

"CURWEN," who is contemplating turning a room into an operating theatre, asks for suggestions for the best treatment of walls and floor (an ordinary board floor). He asks for details of special floor materials.

THE TREATMENT OF ASTHMA.

"H. C." writes: I should be glad of suggestions for treating a bad case of asthma in a man aged 40, who resists all the usual forms of treatment, including protein therapy. Adrenaline controls the attacks, but on an average he is taking three injections of adrenaline every twenty-four hours and is slowly getting worse.

INCOME TAX.

"C. G. H. C.," who is on seven months' leave from an appointment outside the United Kingdom, asks how his liability to income tax will be affected by spending a portion of that time outside the kingdom.

*** Briefly the position is that he is liable to tax in this country in respect of income arising here, but as regards income arising abroad and remitted to him he is not liable provided that he "is in the United Kingdom for some temporary purpose only and not with the intent of establishing his residence therein and has not actually resided in the United Kingdom at one time or several times for a period equal in the whole to six months in any year of assessment" (No. 2 of the Miscellaneous Rules applicable to Schedule D, Income Tax Act, 1918). In applying this rule it should be borne in mind that the "year of assessment" runs to April 5th. Dublin would be outside the United Kingdom for this purpose.

LETTERS, NOTES, ETC.

PYLORIC STENOSIS IN INFANTS.

DR. HUGH T. ASHBY and Mr. A. H. SOUTHAM (Manchester) write: Since the publication of our paper on pyloric stenosis in infants (BRITISH MEDICAL JOURNAL, February 28th 1925), we find that the Rammstedt operation was first performed at the Royal Manchester Children's Hospital in May, 1914, with a successful result, and subsequently in succeeding years. Our statement, therefore, that the operation was first taken up in this country in 1918, though true in a general sense, requires some modification in view of the above fact.

DR. N. R. DHARMAVIR (M.O.H. Padiham) writes: I have carefully read (in your issue of February 28th) the article by Dr. Ashby and Mr. Southam on the above subject. During my experience of twenty-five years as a general practitioner and ten years as medical officer to the local maternity and child welfare centre, I have not yet come across a true case of pyloric stenosis. I have, however, over and over again seen cases with signs and symptoms (with the exception of the tumour, on which the writers themselves "lay little stress, as it is often an exceedingly difficult matter to feel the pylorus") as described for the purpose of early diagnosis, and have always ascribed them to injudicious and improper feeding. These cases are easily amenable to careful and intelligent feeding. Peculiar forceful vomiting, constipation, greediness for food, wasting, etc., are such common symptoms among ill fed infants, and so easily cured, that these must (as the doctors hint) be cases of pyloric spasms and not of stenosis. Then what are the crucial signs or symptoms of stenosis calling for an abdominal operation at such a tender age?

MOTOR CAR PARKS.

THE Automobile Association, since the war, has been in negotiation with the authorities throughout the country for the allocation of the necessary spaces for parking cars. As a result, 111 large towns and cities now have motor vehicle parking arrangements, and 44 towns have erected signs supplied by the A.A. bearing the words "Motors park here." In Liverpool there are 54 of these signs and in Edinburgh 33. It should be noted that cars must not be parked for unreasonable periods; only for the duration of short calls.

A NEW MOSQUITO BREEDING PLACE.

DR. W. E. HAWORTH, late acting director of the laboratory at Dar-es-Salaam, in the *Transactions of the Royal Society of Tropical Medicine and Hygiene*, October, 1924 (p. 162), adduces evidence that mosquitos breed in the crowns of coco-nut palms, where pools of water occur, probably as the result of dew. He urges that no antimosquito campaign can be thorough unless this source of infection is dealt with. His investigations go to show that mosquito breeding continues throughout the year in these pools, even during times of comparative drought, when collections of storm water have disappeared. Within the township areas, such as Dar-es-Salaam and Tanga, the majority of the mosquito larvae detected in these pools were of the biting kind, proved disease carriers predominating at all stations.

INDEX CARD CLIPS.

THE "M. H. S." clip has been designed for the use of medical practitioners and business men in hospitals and public institutions for uniting index cards in book formation, so that the cards will fold flat against each other and occupy a minimal space in the file cabinet. The clips are transparent and can be quickly attached to the card, thus uniting those relating to the same case or subject. They may be obtained from Messrs. Bridge and Co., 92, Chancery Lane, W.C.2.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 36, 38, 39, 42, and 43 of our advertisement columns, and advertisements as to partnerships, assistantships, and locumtenencies at pages 40 and 41.

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 95.